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Communications.

LOCOMOTOR ATAXIA.

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The detail of ordinary cases of this disease has long since ceased to be of any particular value or interest. It is now well known and universally recognized by the profession, and almost every practitioner has seen more or fewer examples of it, so that it no longer has any of the attraction of novelty. Nevertheless, cases which present any unusual symptom or symptoms, or run an unusual course, should be recorded, both for the sake of completing the natural history of a very multiform affection, and as possible aids in the diagnosis of ambiguous cases.

It has happened to me to see a considerable number of cases, and of these, four have presented features of a sufficiently uncommon character to make them worthy of permanent preservation. The real student of disease no longer confines himself to text-books and monographs, valuable as these may be, but runs over the files of his journals to gather up the scattered, but often most important, observations which they contain.

We have not all of us either the time or the ability to write books, but we can all of us record our cases, and thus provide material for the master-builders.

Case 1. The subject of the following case, Mrs. C——, first came under my observation September 15, 1868.

She was a large, fleshy woman, weighing about 200 pounds, sixty-one years old, and the mother of nine children.

Previous to the death of her husband, ten years before, she was uniformly in the best of health, knowing nothing of sickness except at her numerous confinements, doing a great deal of work, conducting the affairs of a large family with the greatest energy and punctuality, and always exhibiting a cheerful spirit, with a tendency to dry wit. The loss of her husband had such an effect upon her mind that she became deranged, and was more or less out of her mind for about a year; her aberration, however, was neither severe nor constant, and was of the character of religious melancholy. She recovered and began to grow fleshy, and at the same time rather clumsy and uncertain in her movements, but seemed to be in tolerable health.

Two or three years after this, as she was sitting in her chair before the fire, she lost her consciousness and fell to the floor. It is not known how long she remained unconscious. From that time her motions have been still more faltering and uncertain, and her speech thick and indistinct, although there has been no evidence of paralysis. From that time to the present, she has been less and less and less disposed to take any exercise from increasing uncertainty of gait, which makes her fearful of falling. About a year ago she had an attack of illness which began with difficult respiration, cough, and pain in the side, of which we have a very indistinct account. This attack lasted three weeks, after which she seemed as well as before, except that her power of locomotion were still more at fault, in which respect she has been steadily getting worse, until now she

can hardly walk at all. In proceeding to describe her present condition, I will begin with the most remarkable of her symptoms—the condition of her motor powers.

She lies in bed or sits in a chair all the time, and shows no disposition to move, being afraid, as she says, to walk for fear of falling. The inability to walk, however, does not result from paralysis, for on testing her muscular power I find that she can move all her limbs equally well, and that she can grasp my hand in either of hers strongly enough to be quite painful, and when her legs are flexed or extended, and she is told to resist, I can neither extend nor flex them against her will; so that so far from there being any lack of strength, her power is, for a woman, almost athletic.

In studying her defect of locomotion, it is necessary to have a person walk on each side of her to support her should she lose her balance, as she is very apt to do, in which case her tendency is to pitch forward. The following peculiarities are noticed in her gait: she lifts her feet unnecessarily high, and in putting them to the ground, which she does with an emphatic stamp, heel first, they waver about as if uncertain where to alight, deviating to the right and left, and it seems to be to overcome this tendency that she brings them down with such sudden force. On shutting her eyes, or turning, and at first starting, her gait is much worse, indeed such trials involve imminent danger of falling.

The same incoherency of action that pertains to her walk is seen also in the motions of the upper extremities, so that when she attempts to take hold of anything she is apt to miss it, her hand passing to one side of it, and in conveying food or drink to her mouth, she will put it to her eyes or nose, and spills things about in the most helpless and annoying manner. This has become such a serious evil that her friends contemplate the necessity of feeding her altogether, like a little child, as not very far distant.

While there is this great disturbance of motor power, there is very little alteration in her sensibility. But the acuteness of sensation is somewhat dulled, and on the inner and front part of the legs, half way between the knee and the ankle, she cannot distinguish the compass-points, even when they are three inches apart. She says, too, that in walking she cannot feel distinctly when her feet touch the floor—they feel as though muffled up in some thick covering.

She has no involuntary movements. She has no headache, and never has had, but has had a good deal of severe pain in the lumbar region, coming on in paroxysms, never lasting more than a day, generally for a much shorter time. This pain she has been free from for a year past.

September 20, she had a paroxysm of very severe pain in the right side of the chest, which only continued an hour or two; was not accompanied by any febrile movement, friction murmur, or local tenderness. About a month afterwards, October 18, she had a similar attack of pain on her left side, which only lasted for a short time.

Her hearing is affected. She hears imperfectly at all times, but the amount of deafness varies. At one visit I may find her almost perfectly deaf, next day perhaps scarcely at all so. There is no appearance of disease of the ears, and no pain.

Her sight is also affected. She has dimness of vision, with diplopia, and generally when her attention is directed to any object, she looks at it with the left eye, covering the right. The pupils have a cloudy, somewhat glaucomatous appearance; they are neither contracted nor dilated, and are sensitive to light. The ophthalmoscope reveals no abnormal appearance.

She has occasionally some difficulty of swallowing, which once or twice has been severe enough to lead to the apprehension that she was about to choke; she has a thick, mumbling, sputtering utterance; she protrudes her tongue readily and in a straight line, and without tremulousness.

She sleeps soundly at night, has no drowsiness in the daytime, and her mental condition, though not as bright as formerly, is not essentially impaired, and she occasionally makes remarks that remind her children of her old propensity to joke.

She has no cough; auscultation and percussion show no sign of pulmonary disease; her pulse is sixty-four to the minute, her heart sounds normal and distinct. Her appetite is good, and her digestion perfect; her bowels are obstinately constipated, never moving except under the stimulus of medicine, and it is doubtful whether they ever would. She has some incontinence of urine, passes a normal quantity; it is offensive in odor, contains a large deposit of ammoniacal phosphates and mucus; it is not albuminous. There is no evidence of any uterine disease.

The most remarkable symptom of her case—indeed, the symptom for which I have chiefly thought it worth recording—remains to be described. This is a constant, copious, and universal desquamation or exfoliation of the cuticle.

She is constantly shedding the most astonishing quantity of epidermic scales from every part of the cutaneous surface.

She says that in the morning a quart of these

scales may be gathered from her bed. This, I suppose, is an exaggeration, but the quantity is certainly most surprisingly great. These scales are rather large in size, white and thin; there is no redness or eruption, and she says there is no itching, though she shows a good deal of tendency to rub such parts of the body as are accessible. Papular and pustular eruptions are mentioned as occasional symptoms in cases of locomotor ataxia, but I have met with no recorded instance of this scaly desquamative affection of the skin, which, indeed, in the degree present in this case, would be phenomenal in any connection. Her skin is universally dry and harsh. This condition has been present for the last three years.

This patient was under my care for about a year and a half when she died rather suddenly of what appeared to be an inter-current attack of peritonitis. A *post mortem* examination could not be obtained. Various remedies were tried in her case with no good effect, except in one singular and unexpected particular. Under the use of large doses of strychnia, the scaly affection of her skin became much diminished, in fact, almost disappeared. Whether this was a pure post hoc, a mere coincidence, who can say?

Case 2. Mr. J——, a middle aged man, Irish, laborer, was under my care during the summer of 1876 in an advanced stage of locomotor ataxia, which was supposed to be of syphilitic origin, as there was a distinct history of syphilis in early life; but anti-syphilitic medication had no effect upon his disease. At the time of my taking charge of him he was so far advanced in the disease as to be confined to bed, no longer able to feed himself at all, and urinating and defæcating involuntarily. He suffered from two or three extensive bed sores.

Soon after the beginning of my attendance he developed unmistakable symptoms of insanity, and in a short time became a raving maniac.

He failed to recognize his wife or the other persons in attendance upon him, whom he at times overwhelmed with abuse, being exceedingly profane and obscene in his ravings. His principal delusion was that he was away from home and under restraint, from which he was incessantly endeavoring to escape, and in his helpless condition in constant danger of rolling out of bed and injuring himself.

He never slept a moment, day or night, except when under the influence of large doses of chloral or some other anodyne, and wore out the strength of numerous attendants in taking care of him. His appetite during all this time was perfectly ravenous, and on several occasions he attempted to eat his own excrement. At last, after two or three weeks of this condition, without any change, he succumbed, literally worn out by his perpetual exertions and want of sleep.

As far as I am aware, insanity is a rare termination of ataxia, and I am very slightly acquainted with the details of the recorded cases in which it has occurred. It has come under my observation twice, in this and in the next case, which I am about to relate.

Case 3. Mr. S——, German, aged forty-eight years; by occupation a collector, in the pursuit of which business he accomplished an enormous amount of walking.

He was also an enthusiastic fisherman, and in his fishing excursions was accustomed to stand and wade in the water for hours at a time, at all seasons of the year. He had been a foot-soldier in the late war.

In February, 1877, he slipped on the ice and sustained a fracture of the left fibula just above the ankle (Pott's fracture). There was a great deal of swelling, and the fracture could not be very accurately adjusted—at any rate it was not. He was a very self-willed and headstrong individual, and insisted on resuming his usual occupation much sooner than was considered advisable. The result was a stiff and swollen ankle, with a marked limp in his walk, and a great deal of pain in the joint. The next winter, almost at the same time, he fell again on the icy sidewalk and fractured the other leg at the same point. This fracture also did but indifferently, but so far from being in a hurry to get out on this occasion, the patient sank into a condition of deep despondency, and refused to leave the house even long after it was deemed desirable that he should begin to do so. During the ensuing summer he began to develop unmistakable symptoms of ataxia, and owing to his lameness from the double injury, it is quite probable that they had been going on some time before they began to attract attention. His disease progressed very rapidly, involving the upper extremities, and soon rendering him almost completely helpless.

As they were in poor circumstances, and his wife was obliged to work for the support of the family, there was no one at home to render him the necessary assistance and attention. He was therefore sent to the Soldiers' Home at Dayton, Ohio, and remained there until the following spring, when he came home to Columbus on a visit. Soon after coming home he became violently insane, and dangerous both to himself and others.

He died that spring or early summer. Of the termination of his case, however, I have no details, as he was sent away to an asylum, where his death took place.

In this case, the disease seems to have had a traumatic origin, being caused, in all probability, by his double injury, through reflex or secondary effect upon the cord. These fractures of the ankle, as is well known, are often extremely painful (they were in this case), and this long-continued nerve irritation, propagated to the spinal centre, might, it seems to me, very well set up after a time structural and degenerative changes, leading to the development of ataxia. But in the present state of the pathology of the disease, we are not *necessarily* led even to this assumption, for it may possibly be that ataxia at first consists in a pure neurosis of function, and the sclerosis and other changes are secondary results. There are those who hold this view, and certainly it is easier to doubt it than to disprove it.

Case 4. Mrs. T——, Toledo, Ohio, aged forty-two years, a native of the United States, mother of six children, of whom four are living; lost her husband about a year ago. Her disease began last June. The first thing she noticed was staggering in her gait, which was soon followed by tingling and pricking sensations in her hands and arms. During the latter part of last summer she suffered much pain in her chest and abdomen, with a sensation of tightness and constriction.

She has never had any darting or neuralgic pains in the legs or feet. Her condition remained about the same until November last, since when she has been rapidly growing worse. The ataxia has increased, until now it is extreme both in the upper and lower extremities. Her condition when I first saw her, May 1, 1883, was as follows:

She is a small, thin woman, weighing less than ninety pounds; of what is called sandy complexion, with light hair and eyes, of more-than ordinary intelligence, and great cheerfulness and equanimity of disposition.

The muscular strength of her lower extremities, tested in the ordinary way, seems to be perfect, as it requires considerable force either to extend or flex her legs when she is told to resist the effort, and she grips strongly and equally with either hand. But ataxia of the lower limbs is almost complete; she cannot walk at all without assistance, having no control over her movements; she cannot even stand a moment with her eyes shut. When lying in bed she does not know where her legs and feet are unless she can see them. Patella tendon-reflex completely absent.

She has had some pricking sensations in the lower extremities, but never any pain. There is some anæsthesia, but not verymarked. She has also extreme ataxia of the upper extremities; she cannot button her clothes without using both hands, and proceeding with great care and deliberation, and in conveying food or drink to her mouth, is as likely to put it to her nose or chin as anywhere else, and when told to touch any given point with the end of her forefinger, she cannot, even when watching the movement and exerting the greatest care, but with her eyes shut, comes very far wide of it.

There is very marked anæsthesia of the trunk, from the first joint of the sternum to a line drawn from one iliac crest to the other. In all this region, anteriorly, posteriorly, and laterally, she feels pricking and pinching very imperfectly, hardly at all, and two compass-points six inches apart feel like one. In this region there is a very marked sensation of girdling or constriction, as though she were tightly encased in wood or iron, with occasional darting pains. She has diplopia, obstinate constipation, occasional retention, alternating with incontinence of urine; her skin is harsh, dry, and unperspirable. Her appetite is good, and for the most part she sleeps soundly at night.

She has not menstruated since last October. Her most distressing symptom is a peculiar form of dyspnœa, during which her chest is fixed, her eyes staring and prominent, and her expression that of extreme fright, but cyanosis or flushing of the face. During these paroxysms no air at all can be heard entering the chest, not a sound; they last nearly a minute, and terminate in a long drawn sonorous inspiration, something like that heard in whooping-cough.

These spells occur generally at night, sometimes in the daytime between the paroxysms which may be repeated to the number of three or four in about as many minutes, and then again after a variable interval from ten minutes up to an hour or two, her breathing is somewhat hurried and laborious. Bromide of potassium relieves her promptly.

These four cases have been taken from my note-book in the order in which they occurred, not to give a general picture of locomotor ataxia, but on account of some unusual and interesting feature that was present in each of these four instances.

In the first case, along with a typical history of the disease we have the peculiar skin affection, an enormous, and in all my experience unprecedented

exfoliation of the epidermis. In the next two we have the unusual termination in violent insanity in both of them, with the probable traumatic origin of the third, as an additional feature of interest. And in the last, the peculiar form of spasm of the glottis, for such I suppose it is, a symptom which I do not remember to have ever seen mentioned in this connection. I have seen a number of cases of ataxia in railroad men, and have often wondered whether in them it was not caused by the constant jarring and vibrations of the moving train. Standing so much as they do, these vibrations are transmitted almost directly to the spinal cord, and one can easily imagine that the long continuance of this cause might have a decided effect upon the molecular constitution of the medulla spinalis.

In conclusion, I may mention that I once saw a decided case of ataxia in a child only four years old. It was associated with a tight phimosis and long prepuce, and I attributed it to this as a cause, but was not permitted to test the correctness of this opinion by performing the operation of circumcision, as I wished to do.

I remember to have seen in some medical journal two cases of ataxia in children with phimosis, but I have been unable to verify the references.

NOTES ON THE TREATMENT OF SUMMER COMPLAINT.

BY JOHN M. KEATING, M. D.,

Obstetrician to Philadelphia Hospital.

[Reported by W. A. EDWARDS, M. D., Asst. Dem. Clin. Med., University of Pennsylvania.]

(*Continued from page* 146.)

There is another form of the very many varieties of intestinal disturbances of children, which is well worthy of consideration at this time, depending, as it does, on a catarrhal condition of the mucous membrane.

The mucous membrane of the intestine is as frequent a seat of catarrhal disorder as that of the respiratory tract, and it has all the same varieties, from a superficial catarrh to a more deep-seated lesion: in fact there is a variety which affects the sub-mucous tissue, and is accompanied by fibrinous exudation. Sudden changes of temperature are frequently the cause of the superficial catarrh, and it may be limited to a simple gastric irritation, become an entero-collitis, and finally pass off with a persistent and aggravating catarrh of the rectum, which I find is frequently overlooked, and is most difficult to treat.

At this season of the year, entero-collitis is more common, and even the greatest care will not avoid it. It is usual to note a larger number of cases occurring after a hot spell, generally making themselves evident about twenty-four hours after the fall in temperature.

Bronchitis is occasionally associated with this form of disease; the symptoms are scarcely necessary for me to note. The treatment is most important. There is usually pain, frequently in violent paroxysms, diarrhœa, which is frequent but not excessive, usually watery; vomiting, which is incessant, and shows great irritability of the stomach.

It should be borne in mind that the treatment of all lesions of the mucous membrane of simple catarrhal variety, is to endeavor in *first* stage, which is one of congestion, to bring about free secretion and thus relieve the inflammation and engorgement; and the *second* is to relieve the passages of the accumulated mucus; and *third* to bring about a healthy condition of the mucous membrane.

Treat an entero-colitis as you would a common coryza, only bear in mind the fact that the intestinal canal in children is much more important than the nasal organs. Alkalies internally, as by sodium bicarbonate or ammonium bicarbonate, if the child is very weak, with small doses of ipecac as a stimulant to the mucous membrane, or probably bromide of potassium or ammonium and minute doses of paregoric if much paroxysmal pain.

In some cases I would give the following combination:

℞.	Magnesia sulph.,	gr. iv.
	Vin. ipecac,	gtt. xvi.
	Syr. rhei aromat.,	gtt. xl.
	Spts. ammoniæ aromat.,	gtt. xvi.
	Tr. opii *camph.*,	gtt. xvi.
	Syr. lacutcarii,	fl. ʒ ii.
	Aquæ menthæ virid.,	q. s. ad fl. ℥ j.

M. Sig.—ʒ i. every hour to a child aged six months.

But should there be much pain or mucus in the stools, the treatment will resolve itself into that of the second stage, which means the use of castor oil to get rid of all mucus.

When a mother says that her child has frequent slimy curd-like passages, varigated, and that there seems to be pain, a great deal of straining, with the occasional appearance of blood, the treatment should be as follows: Emulsion of castor oil according to the following formulæ:

℞.	Ol. ricini,	fl. ℥ iss.
	Glycerinæ,	fl. ʒ ii.
	Pulv. acaciæ,	ʒ iss.
	Aq. cinamoni,	fl. ℥ i. et fl. ʒ ii.

This contains much less gum than is usually

used, so requires more time and care in its preparation.

The use of counter irritation, which, by the way, is most valuable at any stage, in form of mustard foot-baths at night and aromatic poultice to abdomen during the day.

The emulsion should be exhibited every two hours until stools begin to change color, probably four doses will be required; then the child should be placed on bismuth, and acacia in powder, until the irritability of the bowel has entirely subsided.

I frequently note the fact, that after entire relief of the catarrh of the small intestine has come about, there remains a *catarrh* of the mucous membrane of *rectum*, which is obstinate and can only be cured by use of starch-water injections, using a half ounce of starch-water with one drop tr. opii., and in ordinary cases, but one injection will be required.

The diet of these cases is as important as medicinal treatment; the rule should be that those children who are not nursed entirely, should be prohibited all farinaceous and milk food.

I spoke of the value of wine whey the other day in the diarrhœa which arise from exhaustion from heat, but in this catarrhal form I think that in the first stage stimulants are bad.

In these cases I use the following plan: If the child lives on the breast, the mother should be encouraged to nurse it frequently and to give but a small quantity at a time.

If the mother will be guarded in her own diet and will take a dose of castor oil, her milk will often be the most effectual food and medicine the child can have; it is astonishing how much control you have over the child through its mother's milk. I refer you to Dolan's extremely interesting experiments published some years ago in the *London Practitioner*.

In children who are bottle-fed, at once prohibit the ordinary diet; put the white of an egg in a tumblerful of warm water, thoroughly dissolve and slightly sweeten; if this is given instead of the usual bottle, it will be ample nourishment.

For twenty-four or forty-eight hours, until free secretion has begun to take place in the intestinal tract, until fever begins to subside and the restlessness begins to diminish, the child is better without other food. I would then gradually add either a few drops of *brandy*, to the feeding, or use alternating with egg water, small quantities of wine whey.

The next step will be the use of beef or chicken jelly, and if then the child had been accustomed to use milk, it may be placed on very small quantities of milk and lime water. For some time past I have been rather guarded with the use of lime water in children's practice, owing to its tendency to constipate, and also to the fact that I have occasionally found children who could not use it.

I have tried almost all the infant foods, and in selected cases of well children, found that experience bears out the valuable statements of Professor Leeds. Nevertheless, milk is undoubtedly the food for children, and if we can get rid of the tough, indigestible curd of cow's milk, we will accomplish all that is desired, the incorporation of small quantities of farinaceous material, the boiling with some preparation of food, will in a measure accomplish this, but not wholly.

I am now speaking of the subject of sick children, or those whose digestive organs have been weakened as the result of catarrhal disorders. If we can digest the casein, or do so in part, we will render cow's milk the most blessed and nutritive article of diet.

Some years ago my attention was called by Mr. Fairchild to a preparation called extractum pancreatis, and since then I have used this material in very large amounts, and consider it well worthy of attention in children's practice.

I have at present under my supervision a child just recovering from a severe attack of entero-collitis. The child was one year old, and it was difficult to get anything to remain on its stomach. It is now taking in twenty-four hours nearly two quarts of cow's milk prepared in this way: 5 grs. ext. pancreatis and 10 grs. bicarbonate of soda are added to a gill of water, and placed in a perfectly clean quart bottle, which is immersed in water at about the temperature that the hand will bear. This is kept at this temperature for about an hour, it is then placed on ice, and kept until it is to be warmed for the bottle. Of course, double the quantity can be made at once, as it will keep in this way during the day. It is not digested enough to give it a bitter taste. This should always be attended to. The stools have assumed a perfectly natural color, and there is no evidence of the usual curd always found in children who live exclusively on a cow's milk diet.

In convalescence, after a severe prostrating attack of this kind, it is well to give a child a mixture such as the following:

℞.	Ferri et quiniæ cit.,	gr. iv.
	Tr. nucis vomicæ,	gtt.j.
	Syrupi,	
	Aquæ, ää q. s. ad.,	f℥j.

M. Sig.—A teaspoonful three times a day for child six months old.

THE RUBBER-RING TOURNIQUET.

BY ARTHUR E. SPOHN, M. D.,
Of Corpus Christi, Texas.

Since mention was made of my rubber-ring tourniquet in the MEDICAL AND SURGICAL REPORTER of February 10, I have received a great many applications for reprints of my article, published in the *Richmond and Louisville Medical Journal* for November, 1876.

It is impossible for me to furnish the pamphlets or answer each person satisfactorily; therefore I desire to do so through your columns.

I have been using the elastic-ring tourniquet since 1869—having in my possession the first rings made from rubber tubing, which I used in amputating the thigh of a young lady, accidentally shot through the knee-joint.

My attention was called to the necessity for such an instrument, by rolling bands of rubber around my finger, noticing how easily I could drive all the blood out.

Living in Mexico, remote from any instrument maker, I relied on the ordinary tubing and elastic bands for some time, and wrote to Tiemann & Co., of New York, June 17, 1875, to make me a set of rings of assorted sizes, to fit every limb. Not knowing how much rubber to use, the first rings were entirely too strong, and to lessen the strength and increase their diameter, the next set was made lighter and hollow, making them roll more easily. They were still imperfect, only one ring giving satisfaction. This ring was the size for the arm, but I have succeeded in amputating the thigh and resecting the shoulder-joint with it without losing any blood during the operation.

It is surprising how little elastic pressure will control the circulation, and in experimenting during the past twelve years I think I have succeeded in making an instrument that will meet every indication where a tourniquet may be necessary—an instrument which simply rolls up the extremity and forces the blood before it without injuring the minutest capillaries, or may be stretched and placed over the limb to control hemorrhage in cases of injury. In passing painful and diseased parts, they must be stretched so as to make as little pressure as possible. After the operation, in order to see if all the vessels have been secured, that portion of the ring over the main vessels can be raised a little to allow the blood to flow, when any bleeding points can be taken up. I have resected the shoulder-joint three times successfully—without the least hemorrhage—simply rolling a ring up the arm and over the shoulder.

I now feel no alarm after amputations—leaving a ring with the nurse with instructions to place it above the bleeding point—and on two occasions I know I have saved life from hemorrhage in gunshot wounds by this precaution, which would make this instrument invaluable on the battle-field.

I have noticed from time to time articles in several medical journals on rubber rings for controlling hemorrhage, but so long after my rings were in use and published, that I do not consider it necessary to attempt to show my priority, which certainly cannot be doubted. I have never noticed any result, in the way of injury, to the most delicate tissues, from using my tourniquet; and as the set of seven will control the circulation of seven different bleeding points, the value of such an instrument will at once be recognized in cases of railway or other accidents, and I have placed a set in each train medicine chest of the Texas, Mexican, and Mexican National railroads.

My rings have frequently been used as pessaries, and have been worn longer without giving inconvenience than any pessary I ever applied, the advantage being that they are hollow and easily indented by adjacent prominent parts, which would be subjected to uncomfortable pressure by a solid instrument.

A lady was brought to my office a few days ago with a needle in her knee-joint. It had been driven in eye foremost, and broken off. I placed a ring above the knee, and was surprised that not even a drop of blood could be pressed from the incisions, and I could and did follow the course of the needle by noticing the discolored part where it had been forced through the tissues leaving a bloody stain.

Messrs. Tiemannn & Co. are now making my tourniquet from specifications I sent them about two months ago, and I find them perfect in every way.

THE USE OF ERGOT.

H. L. W. BURRITT, M. D.,
Bridgeport, Conn.

Several articles have appeared lately on the use of *Secale C.* in midwifery, which seem to me to contain many errors. Having used this article for more than thirty years freely, and having seen no evil effects, I give the result of my experience.

1. The action of ergot in any reasonable dose is not, as often stated, *persistent*, seldom longer than any strong pain, nor do the fibres contract more than in natural labor. We were taught the shortening of the long fibres and at the same time

relaxation of the circular fibres. It sounds well in theory, but with your hand on the abdomen during pain you practically realize that the action of the muscle is even, and remarkably even, and that the action of the womb, the condition and position of the fœtus being natural, the pains come and go with regularity under the hand (and otherwise the unequal strain gives the first warning often of malposition).

2. The effect of carefully-watched doses say thirty drops each half hour, is not *continuous* or *persistent contraction*, but can be made to imitate strong and regular labor. I have seen the best effects, not as a rule, however, in the first stage, and continued with care gradually through, and with steady pains and perfect rest very often in the third stage, hours of pain and anxiety. Again, if *too large* a dose by any mischance should have been given, ¼ gr. morphine or small dose of chloral will give all the pause you want.

3. The pains *prepare* the parts for the passage of the child, not the *intermission*, as I see stated. The dilation, the secretion, the adaptation, are secured by the *pressure* of the *fœtal head*, which itself is moulded more or less by the same process. The effect of ergot in the sudden expulsion is not different from the natural strain, and neither is it very dangerous where the hand is the guide. It is the delay that causes sphacelus, perineal rupture, or fistula.

The waiting for "nature to take her course," or rather waiting for the incompetent to see "what will turn up," and leaving the steady strain and pressure of the parts by the continuous pressure and neglect to deliver by manual or instrumental force.

4. Delay, not ergot, is the cause of death to the fœtus; and a sure hand or good pair of forceps when the head is advancing slowly or low down, is what is wanted, ergot or no ergot! We have used it in hundreds of cases, and have seen no such fatality, but comfort to the mother in her long agony and viability to the child. Why recall those old errors, "The pulvis ad mortem," "Failure of the ergot after 24 hours to dilate the os," "Hour-glass contractions," "Locking up the secundines," "Dangerous in threatened abortion," "The human race better without it altogether," etc., etc. We have seen none of these terrors. Indeed we have often emptied the womb in cases of retained and ruptured placenta where the use of the hand was inadmissible, by small and repeated doses combined with quinine. Also in cases of habitual abortion at three to five months, we have restrained the tendency, and carried the patient over the dangerous point by doses of 15 drops each of tinct. opii. and ext. of ergot, morning and evening.

The uses of the secale seem indeed to be extending yearly for its tonic, astringent, and hemostatic peculiarities, and its therapeutic effects are far from being understood. In the hands of a midwife, we admit you it is very dangerous. But to the careful physician, and with pure ergot, it is his right arm in labor, relief to the suffering, and far safer than any instrument. We think that a large proportion of the profession will agree with us, and if there be dissenters, they have not carefully watched its effects. We are now using the powdered ergot in a case of developing scirrhus of the breast and epithelioma of the womb with the happiest results and surprising improvement in the discharges, and mitigation of pain, hemorrhage, and general symptoms—not to cure, but to try the effects claimed for it.

Hospital Reports.

LECTURE DELIVERED BY DR. LEWIS A. SAYRE, PROFESSOR OF ORTHOPEDIC SURGERY TO THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

Reported for the Medical and Surgical Reporter by Edward Develin, M. D.

Gentlemen: This boy whom I here present to you suffering from club-foot, came to me from Sing Sing, and thinking the case would be of material interest and practical value to you, I have brought him here to-day to show you an instrument which he has been wearing, and which is called, I believe, the *extension* club-foot shoe, and is perhaps a more recent device for the treatment of this deformity than what I have hitherto brought before you.

This boy is five years of age, and last fall the parents state that they noticed "that the left foot was turning over and inwards." In January, 1883 he was taken to the University College, and from there he was sent to the Dispensary at Fifty-ninth street, where they applied this extension club-foot shoe. The parents inform me that this instrument was applied four times daily, being left upon the foot for five minutes at each application. This is the second case that has recently come under my notice in which this instrument has been applied, and I cannot condemn its application too strongly, as being most inhuman in such cases as this.

But before applying this instrument to the foot let us carefully examine this case before us and ascertain the condition of these tissues, which, at first appearance look to be contracted, but which as I have previously examined the case I know to be *contractured*; by this term I mean that these tissues have undergone structural change. To ascertain if this be true we now endeavor to flex the

foot upon the leg, and by this means put both plantar fascia and tendo Achillis upon the stretch. You will now observe that my assistant holding the foot in this position, I make point pressure upon these contractured muscles with my thumb, and instantly there is a spasm passes up the leg, and the boy cries with pain. This reflex spasm which you here observe we secure in both tendo Achillis and plantar fascia, indicates that both tendon and fascia have undergone structural change, and are then what I call contractured. And no effort to stretch these tissues to their normal length short of rupturing them, can afford the slightest possible relief. On the contrary it only causes inflammation in the parts and increases the deformity.

The mother told me that the extension was made with these instruments to the greatest point of endurance of the boy from January until the latter part of March, and that during this time the deformity has gradually been growing worse, and the boy has become so irritable and nervous from the torture he has endured from these instruments that she can do nothing with him, and has abandoned all treatment.

I cannot impress upon you too strongly that when any tendon, muscle or fascia has undergone this structural shortening, no amount of force short of actual rupture of the tissues can remove the deformity. Why, then, should you subject your patient to this constant agony of useless efforts to secure impossible results by such means as I have just shown you. How far more skillful and creditable then is it to the profession to perform the simple operation of tenotomy in such cases as these; you, by this means, at once relieve your patient of his deformity, and the pain compared to rupture by mechanical force is insignificant.

You effect a grand result by a simple touch of the knife in a moment, instead of subjecting your patients to unavailing efforts on your part, which result in nothing but suffering to them. This subject of tenotomy is one which the ordinary practitioner should be well acquainted with; he should learn to diagnosticate this condition, which I call contractured, so that in all cases of congenital club-foot he may rectify this deformity soon after the birth of the child.

In this case before us, the deformity has been *acquired*, both feet being affected, the left one however, being a little varus. In this case I shall not administer chloroform as I sometimes do, for as I have told you, the pain is but slight during the operation, and this boy is perfectly healthy.

My assistant now bringing the plantar fascia upon the stretch, as I before showed you, I insert my tenotome, flat ways, under the tendon, then turning the edge towards the contractured tissues, I, with a short sawing motion, at the same time pressing upon the fascia externally, completely sever the tissues; then instantly turning the tenotome on the flat side, I withdraw it, at the same time slipping my thumb over the wound; I then hermetically close the wound with a small piece of adhesive plaster, and, as you observe, this slight operation has been performed without the loss of a single drop of blood.

We will now, in like manner, divide the tendo Achillis.

This is a most simple operation, as you observe, and the result is at once shown as we can at once bring the foot to more than a right angle with the leg.

I now envelop the foot in cotton and bandage it with a roller bandage and it is ready to apply the foot-board, which will retain it at a right angle. This foot-board consists of simply a piece of cigar-box, a little longer and wider than the foot of the patient; I then take a piece of adhesive plaster which is long enough to pass from the heel of the board and over the instep of the foot and is fastened under the anterior portion of the foot-board after it is applied. This strip at the heel of the board is securely held by a broad band of adhesive plaster from two to three inches wide, according to the size of the patient, which is long enough to pass from the under surface of the board, anteriorly, up over the toe of the board and thence back to the heel, then under the board again to the front where it is brought from the toe up to about the middle or upper third of tibia, and in very young children up to the thigh.

Having now arranged your adhesive plaster upon your foot piece, you pack cotton under the plaster, and thus make a soft tense cushion for the foot, and then secure the whole with a roller bandage.

With this brief description, and as I here show you the board now ready for application, you cannot fail in your preparation of the same.

I now as you observe, place the board upon the sole of the foot and bring the heel straps over the instep and secure it to the under surface of the foot-board, as I have just stated was requisite. Now, do not pass the broad band of adhesive plaster up the leg yet, but have your assistant, as you observe my son is now doing, hold the foot at a right angle; then securely bind the foot to the board with a roller bandage, leaving the toes exposed in order that you may observe if circulation has been cut off, for should this occur you must at once loosen your bandage. You can now pass your adhesive plaster up the tibia from the toes, and gradually pass your roller up the leg, and over the plaster at such a point as to retain the foot at a right angle, but not more than a right angle, reversing the end of your adhesive plaster at the top in order to make your dressing more secure. In this case we have also a varus of the left foot. I therefore deem it necessary to have a guy upon the outside of the leg to secure eversion of the foot to the desired point; this guy is simply formed of another strip of adhesive plaster about one and a half inches wide, and which starting from the top of the foot is passed to the inner side and then under the foot to the outer side, where it is passed up as you observe to the outer side of the leg, and the required eversion of the foot is secured by this means; this also being secured by a few turns of the roller bandage around both foot and leg.

We will now operate upon the right foot in precisely the same manner as in this left one, severing both tendo Achillis and plantar fascia; in this foot, however, the varus is but slight, and will not need a guy as in the right foot. (The operation was then performed and the foot dressed precisely the same as the left foot with the exception of the guy.)

You have here seen, gentlemen, the whole of the operation of tenotomy, and the appropriate dressings for the relief of club-foot after the operation. It is so simple and the dressing required so easily obtainable that none of you need send these cases to the specialist, if you thoroughly understand the anatomy of the foot and leg, and have besides some little mechanical ingenuity in accurately applying your dressings at the requisite points. The dressing which you have seen me apply we will allow to remain for some seven to twelve days, at which time it can then be removed and the wounds examined. You will then doubtless find that you have complete union of the severed tissues, and that the gastrocnemius can draw the heel of the foot upwards. The dressing will then be again applied for about ten days, when if necessary a club-foot shoe can be worn; in this case, however, I do not think it will be necessary. In our next case I hope to demonstrate to you the union of the severed tissues after tenotomy in club-foot, and will now remove the dressing for the first time since the operation.

Case 2.—This little girl, aged eight years, was brought to me ten days ago suffering from talipes equinus and plantaris. She was perfectly healthy until she was two years of age, when she was suddenly taken with paralysis of both legs, the bladder, and the rectum. No cause could be assigned for this difficulty; the attending physician, however, who was called in, attributed it to worms.

Six weeks after the attack, she commenced to recover, and a year from that time the right leg had assumed its normal functions; the left one, however, the mother states, the child dragged behind her, there being all loss of muscular power. It, however, has gradually, but slowly improved, but for the past year the tendo Achillis has contracted, drawing the heel of the foot up until it assumed a perfect equinus in connection with plantaris, and for the last six months she has complained of severe pain in the limb.

At the time I saw her, both the tendo Achillis and plantar fascia were *contractured*, which was diagnosticated by putting these tissues upon the stretch, and upon point pressure being made upon them, a strong reflex spasm was obtained.

I therefore determined upon division of these tissues, and placing the child under the influence of chloroform, I divided both tendo Achillis and plantar fascia, immediately closing the wounds hermetically with a piece of adhesive plaster, not a drop of blood being lost during the operation. The foot was at once brought to a right angle with the leg, and the dressing applied in precisely the same manner as in the previous case.

I bring her here to-day to show you the result of the operation, and will now remove the dressing and examine the condition of the wound, noticing the function of the gastrocnemius and soleus muscles, and observe if union of the severed ends of the tendo Achillis has been secured.

Having now removed the dressings, you will notice that the wounds are entirely closed, and that the foot is now retained at a right-angle to the leg. We will note the action of the gastrocnemius and soleus muscles when irritated. You here see that by pinching these muscles, I secure such contraction as to draw the heel up almost to an equinus: showing that union of the severed tissues has been perfect and complete. As I before stated, this left leg has been gradually improving, and now that the reflex irritation induced by this pain recently complained of, has been removed, I hope by the aid of massage, electricity, and the use of my club-foot shoe to secure such perfect development of the limb as to render it as useful and normal in its functions as the other. In a week or ten days this dressing can be permanently removed, and my club-foot shoe substituted in its place.

NEW YORK HOSPITAL.

CLINIC OF PROF. WILLIAM H. DRAPER.

Reported by W. H. SEELYE, A. M., M. D.

Aneurism of Abdominal Aorta.

The patient is 37 years old. His occupation is a bar-tender. Is married. His father was always well, and died of old age two years ago. His mother was also healthy. He has not been a hard drinker, though he would sometimes have a spree for a day or two at a time, and then would stop drinking for a month or two. He was never sick before, except that he had bilious fever for three days, and he had an attack of rheumatism five years ago, but was not laid up with it. He has also had syphilis. He was first taken sick with his present trouble a year ago, in the middle of September. He first experienced a pain in the back at night. Two months later this pain was so intense that he could not sleep, though he continued his work during the day without any pain. By the third month the pain became very troublesome in the day-time also, and he has never had a single hour's sound sleep since then.

The important symptom in this case is the presence of pain at the beginning, middle, and end of his illness. This pain seems to start from his back, and extends around in front of his abdomen on both sides, forming a sort of girdle. This shows that it has a central origin in the spinal cord, and it is due to pressure in such a position as to produce irritation on the nerves issuing from both sides of the spinal canal.

Inspection.—There is nothing of especial interest to be seen unless it be a few white spots on the abdomen, which he says were due to the pox, and an almost imperceptible tumor on the left side of the epigastric region.

Palpation.—A well-marked epigastric pulsation is felt just below and to the left of the ensiform cartilage of the sternum.

Percussion.—This reveals nothing of special note. A systematic percussion of the abdominal cavity should begin by defining its margins; by percussing first over the chest, and noticing the change from the pulmonary resonance to dullness as the borders of the abdominal organs are reached. Sometimes the colon passes up higher than usual, and lies between the anterior margin of the liver and the chest wall, and so we will get tympanitic resonance instead of normal liver dullness here.

Auscultation.—A loud and distinct blowing mur-

mur is heard over the point where the pulsation was felt, and can only be due to an abdominal aneurism. Here we see the diagnosis must be made from one important subjective sign, pain, which is confirmed by the objective signs of a pulsation and murmur.

The most important cause of a bilateral pain forming a girdle around the body is Pott's disease, and the next in importance is abdominal aneurism, and the diagnosis must be made between these.

In abdominal aneurism, pain is invariable, and a very important subjective symptom. Of course, abdominal pain is quite common in itself, but in this disease it is peculiar in being of a boring character, and apparently located in the spine, and radiating towards the front of the body.

Another point with regard to the pulsation in the epigastrium as an important objective phenomenon. An abdominal pulsation in the aorta is not confined to aneurism, but is common in sickly, feeble, and thin persons, and in those who are very anæmic, and in whom the aorta is easily felt by compressing the thin, flaccid abdominal walls. And mistakes have been made in supposing that this pulsation indicated the presence of an aneurismal tumor, when it was due to nothing more than an imperfectly filled artery in an anæmic and thin person. The characteristic feature of an aneurismal pulsation is that it imparts a lifting and a lateral sensation to the finger, when pushed down close to the body of the vertebra.

Nevertheless it is somewhat difficult to make out the true significance of such a pulsation, and to determine whether it is due to an aneurismal or some other variety of tumor, and whether the tumor is not an independent growth, which, merely overlying the artery, imparts a transmitted pulsation to the finger. But when in addition you get a distinct bruit as in this case, it is hardly possible to mistake the diagnosis. Yet you do sometimes get this in anæmia also. So here is a source of fallacy which must be guarded against. For we may both hear a murmur and feel an abdominal pulsation, and yet there may be no aneurism. We have therefore got to consider the pain, the bruit, and the pulsation altogether, as co-existing phenomena which indicate only aneurism.

One other point is brought out in the history of this patient, which bears as well on all the cases which appear in this clinic. That is the history of syphilis. Every year I am more and more struck with the observation that syphilis is one of the commonest causes of degeneration in the walls of the blood-vessels. A large proportion of the patients with aneurism who come to the hospital have a distinct history of syphilis. So this is a very valuable point in making the diagnosis.

Treatment.—It is of course impossible to tie the aorta for abdominal aneurism, as has been suggested, and so surgical procedures cannot be considered in this case. The medical treatment is a large subject, and I will not take the time to consider it now. There is not much to do for this man except to make him as comfortable as possible and to relieve his pains, and so he is receiving all the opium needed for this.

MEDICAL SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A Clinical Study of the Cranial Nerves.

BY HARRISON ALLEN, M. D.,

Professor of Physiology in the University of Pennsylvania.

[Read June 6, 1883.]

The cranial nerves at their nuclei of origin and in the course of their intrinsic fibres may be involved in diseased action. It would seem to be more than a coincidence that the nuclei of the ninth, tenth, and eleventh nerves are arranged in a definite series, forming the trineural fasciculus; and that the nerves themselves are associated in function. But this line of reflection is useless when applied to the nuclei of the sixth and seventh nerves. These nerves appear to have no function in common, and yet they arise, in part at least, from the same nucleus. In their range of variation they have no relation with one another; nor in any animal known to the writer does the sixth nerve spring from the facial trunk, but always (in variations from the human type) from the third. The third, fourth, and sixth nerves are naturally associated; but no reason is assigned for the withdrawal of the nucleus of the sixth from the mid-brain, where the nuclei of the third and fourth nerves lie, to the hind-brain, where it is in association with an alien, namely, the seventh. Associated paralysis of the third, fourth, and sixth nerves is common; but paralysis of the sixth and seventh is rare.

The different symptoms of encranial paralysis may be assigned to one or two groups of causes, viz., to pressure, or to injury. Pressure may affect a nerve remote from the origin of the pressure. A tumor of the cerebellum, for example, has been found to be associated with a facial palsy, although neither the nuclei nor the intrinsic fibres of the seventh were involved. Clinical reports do not discriminate between the direct effects of injury and the indirect effects of pressure. Until the influence of this pressure is known and in each case eliminated, the study of localization of diseased action in the brain must remain in an unsatisfactory state.

Among the localities in which the effects of local pressure have been determined, may be mentioned the pontal portion of the medulla oblongata, at which place the inferior vermiform processs of the cerebellum may press against the nuclei of the cranial nerves there situated; the third ventricle, where from a tumor in the corpora quadrigemina, or the pineal body, the lymph of the lateral and third ventricles accumulates in these chambers, and presses downward, notably at the floor of the third ventricle and the lamina cinerea; the region of the hippocampus in the descending horn of the lateral ventricle, which may be distended by the accumulation of fluid in the senile states of the brain. Even where the fluid from the larger ventricles is conceived to pass freely along the iter to the fourth ventricle, it is fair to suppose that if this fluid is excessive in quantity, undue pressure will be exerted on the walls of the iter, and that some instances of par-

alysis of the third and fourth nerves might have their origin in this way.

The causes due to injury of the nerves are of two kinds; primary, when the lesion is due to the direct pressure of a tumor, or a clot of blood; and secondary, when it is caused by the deteriorating influence of a tract of degeneration in the neighborhood.

Of the first-mentioned, that is to say, of the effects of primary pressure, there is abundant clinical evidence; indeed, it is the only evidence which is indubitable. Of the second, it must be acknowledged that the evidence is purely hypothetical; and as far as the writer knows no case can be adduced in its support. It may be more than a coincidence that the study of frontal (transverse) sections of the medulla and of the stem of the brain shows that the nerves most commonly paralyzed in hemiplegia of encephalic origin are those whose intrinsic fibres lie in the immediate neighborhood of the pyramidal tract, as this has been defined by Türck, Flechsig, and Charcot. Thus the third, sixth, seventh, and twelfth nerves would be easily influenced by a diffusion from the track of degeneration, while the remaining nerves of the series would escape.

[After the reading of the preceding paper:]

Dr. Charles. K. Mills said: That the subject touched upon by Dr. Allen was one of great interest to him. With reference to the effects of pressure upon the nuclei of the cranial nerves, he said that, without doubt, some extraordinary and apparently inexplicable affections of the cranial nerves were due to such pressure. Intraventricular effusion, however, such as occurs in hydrocephalus, was not likely to produce local paralysis or spasm, because, owing to the free communication between the various ventricles, unless such effusion took place suddenly, the nerve-centres and conductors seemed to accommodate themselves to the pressure, which was distributed over a large area and over nearly all districts alike.

Those cranial nerves which had the greatest peripheral exposure, and the longest and most tortuous course in bone and membrane (the facial, oculo-motor, etc.) were most liable to be affected by syphilitic, rheumatic, gouty, and other similar diseases.

He supposed that the facial and abducens were so often affected independently, because paralyses of these nerves were usually peripheral; the lesions causing them being situated not only beyond the nuclei, but commonly beyond the superficial origins of these nerves. Besides, some authorities claimed separate, although near, nuclei for the sixth and seventh. He had, however, seen more than one case of conjoint paralysis of the abducens and portio dura, presumably due to degeneration of the combined nuclei.

He recalled one case which he did not think had been put on record, but was well worthy of being detailed in connection with a study of these affections of cranial nuclei. The patient was sent from the South to the Hospital of the University of Pennsylvania by Dr. John Guitéras, and was the victim of complete double oculo-motor paralysis. Associated with this was advanced atrophy and paralysis of both upper extremities. Here he believed the lesion to have been bilateral degeneration of the nuclei of the cervico-brachial nerves and also the oculo-motor nuclei. One of the strange features of the case was the fact that the cranial nuclei between the oculo-motor and cervical regions (those of the pathetic, trigeminal, facial, abducens, glosso-pharyngeal, etc.) had escaped.

Dr. Mills said, also, that the present was perhaps a good opportunity to put on record an observation on cerebral glosso-labio-pharyngeal paralysis. It is well known that this affection is usually attributed to degeneration of the cranial nuclei; in fact, it is often called "bulbar paralysis." A patient presenting the oral, labial, lingual, and pharyngeal symptoms of this disorder, had died about two years before at the Philadelphia Hospital. Examination showed no lesion of pons or medulla. Along the outer border of both lenticular nuclei, and extending into the external capsule and claustrum, were long, narrow, and somewhat irregular areas of degeneration; softened or broken-down districts surrounded by walls of harder, darker tissue. Kirchoff and others had since reported similar cases, but up to the time of making the observation he had never seen such a case reported.

In conclusion, he said that Dr. Allen had discussed the probability of lateral diffusion of descending degeneration. He thought this lateral extension of degeneration more likely to occur at the top of the system than in the motor tracts, from cell to cell in the central zones rather than from fibre to fibre in the conducting columns. He confirmed Dr. Allen's remarks with reference to the practicability of naked-eye observations of degenerated areas and tracts; and spoke of the brain of a hemiplegic negro murderer, presented by him to the Philadelphia Pathological Society, which showed atrophy of the right cerebral and of the left cerebellar hemisphere, and a connecting tract of degeneration through the pons.

Dr. W. W. Keen referred to one point mentioned by Dr. Allen, the question of the common nucleus for the sixth and seventh nerves, and called attention to an extremely rare and interesting

CASE OF CONGENITAL AND BILATERAL PARALYSIS OF THE SIXTH AND SEVENTH NERVES.

This case he had been requested to see by Dr. Geo. C. Harlan on account of its bearing on the artistic anatomy of the face. Dr. Harlan had reported it in full in the *Trans. Amer. Ophthal. Soc.* for 1881. Dr. Keen had had his face photographed as well as copies taken of a photograph in child hood.

At the date of examination he was eighteen years old. His expression in the second photograph had scarcely changed at all from that of the earlier one. His face had simply enlarged. The condition had existed from birth. Not a muscle of the face responded either to the will or to the battery. The corner of the mouth could be slightly depressed by the platysma. Salivation was normal; hearing was good; speech perfectly intelligible, and only affected by the want of control over the lips; taste and sensation in the tongue were unaffected.

There was double internal strabismus; the cornea was slightly dull; vision O. D. $\frac{20}{126}$ and O. S. $\frac{20}{C}$; not improved by glasses; the impairment

was chiefly due, apparently, to constant epiphora; ophthalmoscopic examination unsatisfactory, but the fundus seemed normal. Fixation was with the macula in each eye. No diplopia.

The absolute, bilateral and congenital absence of function of the sixth and seventh nerves, without any involvement of the chorda tympani, points clearly to defective development of the nucleus common to the sixth and seventh nerves, and tends to confirm the assertion of Sapolini (*Amer. Journ., Otology*, October, 1881, p. 312) of the differentiation of the chorda by origin from a distinct nucleus as a thirteenth cranial nerve.

In reply to the discussion elicited by his remarks, Dr. Allen thought that the manner in which the effects of locomotor ataxia are witnessed in the spinal cord, confirmed his own impressions with respect to the manner by which diffusion can take place about a tract of degeneration. It is well known that in this disease the central ravages are not confined to the postero-lateral column in which they are initiated, but extend to the postero-median column, and may even pass over the postero-median fissure. A yet more striking instance is seen in the experiment of Gudden, who extirpated the eyes of rabbits and observed the change that took place in the optic tracts. It was found that the paths of degeneration were not limited to the visual lobes of the corpora quadrigemina, but had involved adjacent structures by diffusion. The effects of degeneration seen in the peripheral nerve trunks, where they were strictly limited by reason of the medullary sheaths, would not serve as precedents for the localization of similar effects in the central nervous system where such sheaths are so often absent.

EDITORIAL DEPARTMENT.

PERISCOPE.

Frightened to Death.

The *British Medical Journal*, April 7, 1883, says: The serious effects of shock to the nervous system, especially by fright, are constantly witnessed, the results being most commonly syncope and convulsions. Death itself is, fortunately, comparatively rare. It is reported in the newspapers to have occurred at Brockley, on March 21, in the case of a girl, aged eighteen, who was frightened to death by a man dressed as a ghost, near the Deptford cemetery. The pathology of emotional death is of great interest, and varies in different cases. In some instances, a fatal issue results from sanguineous apoplexy; in others, and much more frequently, from shock to the heart. Examples of the former are recorded by Dr. D. Hack Tuke, in his "Influence of the Mind upon the Body." Thus, a woman at Bradford received a fright from a man throwing a stone against her window. He had previously threatened her. She soon afterwards complained of numbness, and rapidly became insensible. There was right hemiplegia. She died in seven hours; and, on *post mortem* examination, a clot of blood was found in the left lateral ventricle. The cerebral vessels appeared to be healthy. In the well-known example of death from the heart which occurred in John Hunter's own case, we have an illustration of the cardiac class. This organ was extensively diseased, and the left ventricle was strongly contracted. Other instances of death from emotion, in which the stress had evidently fallen upon the heart, and not upon the brain, are recorded in the collection of cases of death from powerful emotion to which we have referred. In some cases, however, there was no evidence of disease of the heart or of any organ of the body, as might, indeed, be expected. For instance, a man is reported to have died at Twickenham after witnessing the death of a neighbor. He made the remark: "I have never seen any one dead before, and hope I never shall again." There was a *post mortem* examination made by Dr. Ward, but nothing was found to account for death; both ventricles of the heart contained only a little fluid blood, the organ itself being normal in size, and healthy. There is no reason to doubt that, in such instances, fatal syncope may arise simply from the action of the heart being inhibited, whether by direct excitation of the vagus, as maintained by Brown-Séquard, or of the accelerators of the heart in the first instance, followed by exhaustion, and the unantagonized play of the former. Any way, if the heart, as in Hunter's case, be strongly contracted on its contents, and the blood expelled, one efficient cause of syncope with fatal results is present. Probably this was the pathological explanation of this unfortunate girl's death, from the silly practical joke played upon her. She arrived home after her fright, in the road by the Deptford Cemetery, at Brockley, looking very ill and excited. She is said to have taken off her waterproof, drawn a chair to the table to take supper, then fallen forward with her head on the table, and died after a short struggle. Mr. Hollis, the medical man who was called in, made a *post mortem* examination, and reported that all the organs were healthy, but that the state of the heart, combined with the fright, would account for death. We should be interested in knowing whether this is meant to imply organic disease of the heart, or only the condition of the walls of the heart and its contents—the result of the shock. We conclude the latter. It is to be hoped the miscreant will be discovered, and receive the utmost punishment which the law allows. The coroner stated at the inquest that five other persons had been frightened at the same spot. We do not know why the jury did not record a verdict of "manslaughter" against some unknown person.

The Influence of Calomel on Digestion.

The *Brit. Med. Jour.*, July 7, 1883, says that Dr. Vassilieff has found, from experiment, that the presence of calomel, at least up to the amount of five grammes, in the alimentary canal, does not interfere with the gastric juice, nor affect the triple influence of the pancreatic fluid on albumen, fat, and starch; on mixing the latter fluid with fibrin and calomel, the formation of certain products, indol, etc., always appearing as a result of prolonged digestion under normal circumstances, is prevented. The gases generated in the process of pancreatic digestion contain none of the usual products of fermentation and decomposition when calomel is present: sulphuretted hydrogen and pure hydrogen are absent, carbonic acid is diminished to from two to ten per cent.; whilst, under natural circumstances, from fourteen to fifty-four per cent. is found in the gases evolved by the action of the pancreatic fluid. In fact, calomel prevents all other changes in nutritious substances, save those produced entirely by the digestive secretions, decomposition and retrogressive processes in albumens being entirely checked. Calomel also prevents butyric acid fermentation, as Vassilieff found by experiments on cheese. The action of calomel readily explains the cause of the green color of fæces passed by patients to whom that drug has been administered. Hoppe-Seyler rightly attributed this coloration to the presence of unaltered bile. Now, under normal conditions, bilirubin and biliverdin are changed, by a process of decomposition, into hydrobilirubin, and thus become no longer recognizable in the excretion; but this process is arrested by calomel, and the coloring agents, unaltered, give the fæces their peculiar bright green hue.

These researches are described at length by Dr. Vassilieff, in the *Zeitschrift für Physiologische Chemie*, vol. vi., page 112. He has found that this action of calomel is due to its power over the micro-organisms intimately associated with the process of decomposition which takes place in food during digestion. The drug prevents the development of micro-organisms in the digestive fluids, and also destroys any bacteria and micrococci already developed. This fact was proved first by artificial digestion. Vassilieff then made a series of experiments to find whether calomel had the same influence in natural digestion. Thirty grains of calomel were administered to a dog, in two doses, and the animal was killed a few hours later. Under all precautions, the contents of the intestines were then carefully analyzed. Neither indol nor phenol could be found; and it will not be forgotten by those who study contemporaneous physiological research, that other agents—such as salicylic acid—prevent the formation of indol; and that pancreatic mixtures, formed from natural pancreatic juice, or infusion of pancreatic glandular tissue, undergo septic changes with very great rapidity, in spite of all precautions. None of these changes, nor any formation of indol, occurred in the food taken by dogs to which Vassilieff administered calomel. On the other hand, leucin and tyrosin were found in abundance. Under natural circumstances, these products of pancreatic digestion are so rapidly decomposed, that they cannot be detected in semi-digested food. Hence calomel has no influence on the action of the digestive fluids, but entirely prevents those true retrogressive and putrefactive changes whereby the highly unstable products of these fluids are rapidly decomposed, and micro-organisms quickly developed in great numbers. When calomel enters the alimentary canal, leucin, tyrosin, bilirubin, and other substances, remain unchanged. and bacteria are checked and killed.

Infected Oysters.

The *Medical Herald*, April, 1883, contains the following by Fred. Eklund, M. D., of Stockholm:

It sometimes happens with us, as with others where oysters are consumed as luxuries in large quantities, and by epicures, that the consumers are affected with various malaises. In this regard Baudrimont also says that oysters have frequently been the cause of accidents, which seem to be the result of a disease in the mollusk, or of a certain condition of the stomachs of persons who have eaten them.

Immediately a question arises—it has not yet been proved that the morbid condition developed by the oyster may not be due to the presence of copper in the mollusk. Professor Maurice Nielly raises the following question: Does the blood-poisoning by oysters, muscles and cetena arise at the time they are consumed, or from the minerals or vegetation upon which they have lived, the diseases with which they are tainted, or from their accidental putrefaction? So many questions to be settled by observations in which we are deficient.

In a microscopical examination of the juice, and also of the parenchyma of the liver of oysters supposed to be fresh, I observed that they contained representatives of two innumerable multitudes of schizomycetes. We must recognize the plax scindens as the determinate cause of scarlatina, which, according to the observations of the very learned Professor Octerlony, of Louisville, Kentucky, who has verified my researches, is now well established. In the light of these observations I find a plausible explanation of the cases of scarlatina produced in the children of our families, and our young women who have not been previously affected by the disease in question, after the ingestion of the oysters, and in which case it has been impossible to state each contagion in the usual sense, nor to explain the thing in another way. To me it seems an incontestable consequence that we possess in oysters infected by the cells of plax scindens, a very sensible reagent for experimenting, and to be grateful for, as a person possessing the privilege of being perfect, to be relatively greater or less in regard to scarlatina, which in this case does not manifest itself by scarlatina-form eruptions. After the natural attenuation, in which one finds the contagion in question in many oysters supposed to be fresh, that may permit me to put the question if the repeated methodical ingestion of oysters, that contain the plax scindens in their juice, by our healthy children to be able to become a perfect means to prevent scarlatina as is shown in vaccination to prevent smallpox? I mean to say that healthy people, since it seems evident to me that children whose organisms are already predisposed to disease by the continued respiration of excrementitious gases, the ingestion of the virus, too, will determine the gravest cases.

It is noteworthy in the oyster-bed all the time, that the sea-water in the reservoirs is not renewed too often, but abandoned to putrefaction, which is abolished on the invasion of myriads of vibrions blown in the beard of the oyster. J. Arnould says that the ingestion of mussels, and perhaps some other shell-fish, is now and then followed by gastro-intestinal disorders, the fever, the burning eruption, with tumefaction of the tongue, the pharynx, and the eyelids. Some reports of causation show these derangements of the digestion, the absorption of a mass unaccustomed to putrid matters, and perhaps the germs of the same vibrions as the nettle-rash, angio-neurotic fever, with the vibrions aforesaid. It is this that renders it impossible to discriminate to-day, notwithstanding microscopical observations.

The Treatment of Hay Fever.

Mr. W. F. Phillips writes in the *Brit. Med. Jour.*, July 14, 1883:

"It is just over five weeks since a lady placed herself under my care for the treatment of hay-fever, or summer catarrh—a very much better name. She had suffered severely for many years, and sometimes from the end of May to near the end of July with little or no intermission unless she kept indoors. Her mother, it is worthy of remark, was very sensitive to the odor of certain flowers, and was affected by some of them even to the extent of fainting. She was not subject, however, to summer catarrh.

"Knowing how exceedingly unsatisfactory is the treatment recommended and practiced for this disease, as is sufficiently evident from the recent communications to the *Journal* on the subject, I sought for rational indications that might guide me to the selection of a remedy. I thought of the neurosis that seems to underlie most cases of this kind, and to constitute the essential cause or predispositions on which the disease depends; of the characteristic symptoms of the malady: the injection of the conjunctiva, the hyperæmia and hyperæsthesia of the nasal cavities, the excessive secretion of tears and mucus; and then I bethought me of a drug whose physiological action might indicate the possession of the power to control such symptoms. Belladonna was the drug that suggested itself at once, and I determined to give it a trial, all the more hopefully because I remembered how strikingly useful on similar indications, and by a parity of reasoning, I had often found it in ordinary conjunctivitis and simple catarrh. I began with the following prescription:

℞. Succi belladonnæ,	♏ xxiv.
Aquam ad,	℥ iij.

Misce. A teaspoonful to be taken every hour till relief is obtained.

"The medicine was taken without the production of any undesirable effect, and with very marked advantage indeed—an advantage that became still more evident and unmistakable, both to the patient and myself, when the dose was increased from one minim to one and a quarter, (half a drachm in three ounces). Once, too, when the eyelids were especially tender, the patient was advised to use the mixture as a lotion to the affected parts, and this local application was found to be a most useful addition to the internal administration of the remedy. Repeatedly, when the symptoms of an attack had been allowed to begin, the patient found prompt relief after a few doses of the drug, the catarrhal affection disappearing first, and then the asthmatic; and on taking it regularly every day after the malady had been subdued, she has found to her delight that she can take her walks abroad through blooming grass and flowers without the least protection or precaution—a thing she has not been able to do for years before.

"The patient, remembering no doubt the failure of past treatment, pronounces the remedy 'a great success;' but, however satisfactory the case may be, it is, as far as I know, a solitary one, and therefore stands in need of confirmation and support."

The Early Symptoms of General Paralysis of the Insane.

Dr. W. B. Goldsmith contributes an article on this subject to the *Archives of Medicine*, August, 1883, which concludes as follows:

1. That the striking and characteristic group of symptoms ascribed to the disease by Calmeil in 1826, and having greatest prominence in most text-books, since, is to be found only exceptionally in the cases of to-day at the time when the diagnosis is most important.

2. That physical and mental symptoms usually appear nearly synchronously, so that the physician has the presence or history of both to aid him when called upon for a diagnosis, and it is probable that most of those who report cases of general paralysis without mental impairment are not sufficiently expert to recognize a moderate degree of dementia.

3. That their observations agree with those of most writers in making defective articulation the most frequent and characteristic early motor symptom.

4. That changes in the pupils and disorders of gait are less frequent and have less value in diagnosis than is usually ascribed to them, and that given pupillary changes are no more frequent in one stage of the disease than in another.

5. That the patellar-tendon reflex is found markedly supra-normal in nearly twenty-five per cent. of general paralytics, and that the presence of this symptom is of strong corroborative value in diagnosis, though its absence has none, and that no peculiar condition of the patellar-tendon reflex can be associated with any given stage of the disease.

6. That hallucination or impaired function of the special senses is very rare as an early symptom; hallucination (auditory) having been noticed first in but one case, and impaired vision but once in a syphilitic case. The diminution in the sense of smell, which Voisin thinks very frequent in the early stages, was not noticed in any of my cases, though it may have been present and escaped attention in some, as slight failure is difficult to recognize.

7. That it is of great importance in the case of a patient showing mental symptoms to inquire carefully for a history of convulsions or loss of consciousness, as these were the first motor symptoms in twenty of my cases.

8. That among mental symptoms the marked exhilaration, with delusions of wealth and greatness, which is usually considered the characteristic mental symptom, is present early in less than one-fourth of the cases, and that simple failure of mental capacity and activity, and mental depression are the more frequent first mental changes.

Cysticercus in the Eye.

Dr. W. J. Collins reports this case in the *Lancet*, May 26, 1883:

A. F. R——, aged six, a fair-haired, blue-eyed child, the daughter of a laborer living at Holloway, was recently seen at the hospital. The following notes were taken: She has been suffering, according to the mother's account, from severe headache and night screaming for the last six months, and it has been noticed that the child squinted with the right eye, and has been in the habit of rubbing or covering that eye with her hand. Has not had any fits. The external appearance of the eyes is normal, with the exception of slight external strabismus of the right eye, but she can fix an object with either eye. The media are clear, the tension normal; the vision of the left eye $= \frac{6}{6}$, of the right $\frac{5}{60}$. On examination with the ophthalmoscope a brilliant white reflex from the posterior pole of the right eye is at once discerned, and on closer examination a sharply defined subglobular mass, about six or seven times the size of the optic disc, is made out, set in the fundus to the outer side of the disc, but projecting into the vitreous and overlapping and obscuring the inner third of the area of the optic papilla. The outline of the mass is more or less circular everywhere, except at the upper and outer part, where it is rectangular. Along the outer and lower border is seen a crescentic area of a greenish-grey color, but shading off into healthy fundus, and over which small vessels run, and then dip down to pass beneath the white mass, under and through which a very tortuous artery can be seen. Again, at the lower and inner part the retina is raised and detached over a small area of hemispherical shape, as if stretched over some subjacent mass. The optic disc is in a state of intense hyperæmia with effusion, and exhibits a striated woolly appearance; while its vessels are large and tortuous, and in parts buried by the effusion and proliferated fibres through which they run. The diameter of the cystic mass is estimated at nine or ten millimetres, and it is in a plane anterior to the retinal vessels Nothing, certainly, resembling a head, hooklets, or suckers can be made out, and no spontaneous movements have been observed during any of the many examinations which have been made of it. The remainder of the fundus is healthy, with the exception of two or three hyaline, streaky, and slightly pigmented patches in the choroid. The fundus of the left eye is natural. The child has suffered from threadworms, but there is no history of tapeworm, and a dose of male fern failed to bring any away. The girl has no special predilection for pork, but has partaken of it at various times.

How to Catheterize the Pancreatic Duct.

The *Weekly Medical Review*, June 23, 1883, tells us that the Experimental Physiologists recently in attendance upon the American Medical Association at Cleveland, Ohio, were greatly interested in Prof. L. B. Tuckerman's demonstration of a method by which the pancreatic duct — like Steno's duct—can be catheterized at will. The methods now in vogue for obtaining the pancreatic secretion are imperfect, and their results misleading. Tuckerman makes a permanent duodenal fistula opening into the intestine just opposite the mouth of the pancreatic duct, a peculiar canula is inserted, and in the animal he brought before the section, the orifice of the pancreatic duct occupied the center of the area of intestine visible at the inner extremity of the canula. By placing the animal on its left side, and throwing light into the canula from a head mirror, a catheter could be passed into the pancreatic duct without disturbing or distressing the animal in the slightest. By keeping this catheter in place for a short time a transparent, strongly alkaline fluid was collected, that possessed well marked amylolytic, proteolytic, and emulsive properties. The advantages claimed for Tuckerman's method are:

1. The healthy condition of the animal from which the fluid is obtained.

2. The fact that the secretion thus obtained is free from admixture with other fluids.

3. The power of procuring pancreatic secretion at any time and under all circumstances.

The lines along which Tuckerman holds his method will advance positive knowledge are:

1. The variations (if any) in pancreatic secretion during different periods of digestion.

2. The influence of diet upon the amylolytic, proteolytic, or emulsive properties of pancreatic juice; and,

3. The relations of the spleen to the secretion of trypsin.

The Significance of the Transmission of Sound to the Ear Through the Tissues in Aural Disease.

Dr. Samuel Sexton thus concludes his paper on this subject in the *Medical Record*, July 28, 1883:

I. When the vibrating tuning-fork, placed on teeth or vertex is better heard through the tissues on one side, it simply indicates that the better ear excludes wholly or in part such (tissue) transmission, but it does not prove that the auditory nerve in either ear is affected.

(Of course, if the nerve of audition be gravely affected, sound will not be heard by any method of conduction.)

II. If the conductive mechanism is absent or greatly damaged in one ear, while the other remains more or less normal, aërial transmission will be found to be ineffectual in the diseased ear, while the tuning-fork allowed to vibrate as before will, therefore, be best heard in the diseased ear, and its vibrations will be almost entirely excluded from the healthy ear.

III. In deafness from labyrinthine disease, pure and simple, the middle ear being normal, the tuning-fork would be best heard, if heard in any degree, by aërial conduction, because bone conduction would be excluded.

(In those extreme cases where destructive disease of the nerve has taken place, impulses of sound may be appreciated irrespective of either the transmitting or labyrinthine structures; thus the deaf-mute is conscious of the sound of thun-

der, artillery, drums, stamping with the foot upon a floor, and the like.)

IV. If the above deductions be true, we may conclude that the tuning-fork is of less value than has been supposed in the differentiation of aural disease.

Chyluria with Filaria Sanguinis.

The following case is given in the *Centralblatt für die Med. Wiss.*, February 17 (from Virchow's *Archiv*, Band xxxix.):

A woman, aged thirty-two, after violent bodily exertion, suddenly passed chylous urine; she had some time previously suffered from a dull pain in the left hypogastrium. The urine looked like milk, had acid reaction, and contained albumen but no sugar; its specific gravity was 1018. Lumps of fibrin were sometimes evacuated, and the microscope detected in these oil-globules, white and red blood-corpuscles, and filaria in the sediment. Examination of the bladder, and catheterization of the left ureter, were effected after dilatation of the urethra. The withdrawal of the catheter was followed by a flow of milky urine into the bladder. A great number of filariæ were found in the blood, especially between nine and eleven o'clock at night; after two o'clock none were passed. The patient's health gradually failed more and more; chylous diarrhœa occurred, and death took place about six months after the accident. The *post mortem* examination could only be imperfectly performed. On the left side of the pelvis there was found a large multilocular sac distended with chylous fluid. The enlarged urinary bladder which appeared imbedded in a fold of this sac, communicated therewith by an aperture in its upper wall. The abdominal lymphatic glands and lacteal vessels were enlarged and dilated. This cystic tumor the author considered to have had its origin in the fusion of the lymphatic vessels, and dilatation through thrombosis, with the presence of filaria.

Salicylic Acid in Skin Diseases.

The *Med. News*, June 9, 1883, says that Dr. Rabitsch has used with success, in some affections of the skin, an alcoholic solution of salicylic acid, having the strength of ten per cent. (10 parts of salicylic acid, 90 parts of alcohol). Sometimes the affected parts are merely sponged with this solution; in other instances, bandages, moistened with the solution, are applied. The cases thus treated consisted of herpes tonsurans, involving most of the scalp, the ears, and the neck, and large patches had formed on the thighs and limbs; two of pityriasis versicolor, two of eczema marginatum. Most of these cases appeared to be of long standing, and yet they yielded completely, and, comparatively speaking very rapidly, to applications of the salicylic acid solution. Dr. Rabitsch prepares the parts for the treatment by the preliminary application of glycerine, followed by soap and water, to secure the detachment of crusts, and then the solution is freely used in the modes above described. How much of the result may be due to the alcohol, and how much to the salicylic acid, does not appear.

Reviews and Book Notices.

BOOK NOTICES.

A Compend on Materia Medica and Therapeutics with Especial Reference to the Physiological Actions of Drugs, Based on the Sixth Decennial Revision of the U. S. Pharmacopœia and including many Unofficial Remedies. By Samuel O. L. Potter, M. D., Acting Assistant Surgeon, U. S. Army. Pp. 140. Philadelphia. P. Blakiston Son & Co., 1883. Price, $1.00.

This is a very good little volume, and one well calculated to serve its purpose. While we fear that "compends" have a tendency to tempt students to neglect a more exhaustive and complete study of the subject, yet we know that they are in demand, and that their use is extensive. Such being the case, we are glad when called upon to notice as good a specimen of this class of literature as the one before us.

The Natural Cure of Consumption, Constipation, Bright's Disease, Neuralgia, Rheumatism, "Colds" (Fevers), etc. By C. E. Page, M. D., 278 pp. 12mo. Price, $1.00. New York, Fowler & Wells, Publishers, 753 Broadway.

By this term of "natural cure," the author means to designate a work on popular hygiene, which aims to impart to the public the knowledge necessary to enable them to avoid the predisposing and exciting causes of the various diseased conditions that are discussed. The mission of these rapidly accumulating works on prevention is a most noble one, and they deserve extensive popularity and wide reading.

Treatment of Diseases of Infancy and Childhood, by Charles H. Goodwin, M. D. New York. C. H. Goodwin, M. D., 245 W. 53d St., 1883, pp. 284, price $2.50.

While we cannot recommend this book as absolutely essential to the physician, yet we would say that beyond doubt he can derive some practically valuable information from its pages. It would seem that one of the characteristics of our day and generation is to allow others to do our thinking for us, and while thus inducing habits of dependence on others, throwing our independence into the backgrounnd; yet such practices are not really so censurable as might at first seem, for they serve, through the agency of such books as the one before us, to bring home to the far away physicians, the thoughts, experience and teaching of the leaders of the profession. This book contains over four hundred formulæ from the services of such men as Flint, Hammond, Gaillard Thomas, Sayre, Alonzo Clark, and a host of others.

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HYPNOPTIC PROPERTIES OF THE ACETALS.

Diethylacetal ($C^6H^{14}O^2$) has been recently presented by M. Von Mering (*Berliner Klin. Wochen*), as an excellent substitute for chloral. It is a substance of a bitter, slightly burning taste, soluble in eighteen times its volume of water, and freely in alcohol. From experiments on animals the author concludes that the acetals, and particularly diethylacetal, have a special action on the nerve centres, suspending their functions, commencing by the brain, and extending to the medulla and bulb. In toxic doses, these substances produce arrest of respiration, and, later, arrest of the heart.

At the dose of from ten to twelve grams, this new medicament produced sleep lasting an entire day in six subjects, and induced a marked attenuation in subjects suffering from severe injuries.

The clinical observations published by M. Stoltenhoff are favorable to the conclusions arrived at by M. Von Mering. In a case of dementia, where continual agitation and persistent insomnia were the main features, an entire night's rest was obtained after the administration of five grams of this medicament, and the patient remained calm all the following day. This salutary effect continued, and up to the present time the patient has absorbed 320 grams of this substance.

In two other cases of dementia, and in a case of furious mania, equally good results were obtained, and in the latter case it was administered at the dose of five grams for thirteen consecutive days; the sedative and hypnotic effects of the drug usually supervened in from five to thirty minutes after its ingestion, and lasted from four to ten hours. Both of these observers remarked no subsequent derangement of the functions after administration of the medicament.

However, two other clinicians, M. Berger (*Breslauer Aertzl. Zeitschr.*), and Prof. Leyden (*Deut. Med. Woch.*), found that it required large doses (ten to twelve or eighteen grams) to obtain any positive effects, and that these were of short duration, from twenty minutes to one hour. It was remarked, also, that the caustic action on the mucous surfaces induced nausea and vomiting on

the following day. In fact, in the opinion of Prof. Leyden, acetal is much less active than chloral, and offers disadvantages not possessed by chloral.

HOW TO AVERT THE CHOLERA.

Now, when each morning, as we pick up the paper, we tremble lest we may read the unwelcome news that cholera is with us; the following forcible remarks from the *London Lancet*, possess a peculiar interest:

"What, however, we do assert, is that medicine, as a preventive art, in its dealings with the germs of disease, ought to be able to grapple instantly and successfully with cholera. We know that it is propagated solely through excreta, and that water is the great carrier of the infective germs. Obviously, if the excreta of a cholera patient are allowed to dry in contact with the air, they may float away in the atmosphere, and the air will then become infected; but in a primary sense it is the water to which we must look. In any case, it has been demonstrated that, provided all the excreta from a cholera patient are instantly destroyed—not merely disinfected—the disease will not spread. The malady can no more develop *de novo* than a plant can grow without seed. It is no use waiting until the disease has effected a lodgment in our midst. If choleraic dejecta have passed into the sewers before the nature of the disease has been recognized, as is most likely to happen, the seed has been already sown broadcast, and the production of a crop of cases in such a locality—it may be seemingly far from the first case, but in connection with it—will be inevitable. The only effectual safeguard against the epidemic we desire to avoid is to begin at once to destroy *all* diarrhœa stools, lest too late they may be found to have been choleraic! As a matter of precaution we ought always to destroy the stools of fever and diarrhœa. It is wanton recklessness to allow them to pass into the sewers. This is how disease is spread and perpetuated, when it should be stamped out. Whatever disinfectant we employ should be used *at once*, and of strength sufficient to accomplish the object in view. These are hints which should be reduced to practice without delay."

SPONTANEOUS DEVELOPMENT OF GAS IN THE BLADDER.

In a recent number of the *Annales des Mal. des Organes Gen. Urin.*, M. Guiard makes a complete study of this symptom, which he terms "Diabetic Pneumaturia," to which we have already briefly referred.

The emission of gas from the urethra at the same time with the urine, is a relatively rare symptom, occuring under two different abnormal conditions: either the gas comes from the intestinal tube through an abnormal communication or fistula existing between the bladder or urethra and the intestine, or on the other hand, it may be developed in the urinary organs, and particularly in the bladder. It is this last form which M. Guiard has considered in his memoir, attempting to elucidate its pathogenesis and semeiologic value.

From the observation of a number of cases, he has arrived at the conclusion that pneumaturia is a symptom of saccharine diabetes. The glucose contained in diabetic urine would, according to his ideas, undergo alcoholic fermentation in the bladder, through the introduction of an organized ferment during catheterism, and, in such case, the sugar would form alcohol and carbonic acid; the alcohol remaining mixed with the urine and the carbonic acid expelled from the urethra during micturition.

To establish the truth of this theory it would be necessary to demonstrate the presence of alcohol in the urine, and the fact that the gases expelled are composed entirely of carbonic acid.

The treatment of this troublesome affection consists of intra-vesical injections of nitrate of silver (1–500), or of boracic acid (1–20).

Treatment of Lupus Erythematosus.

Dr. Fox, of New York (*Journal of Cutaneous and Venereal Diseases*, Vol. i., No. 5), recommends the following application as being useful in lupus erythematosus: Chrysarobin, 15 parts; salicylic acid, 10 parts; calamine, 5 parts; ether, 10 parts; flexible collodion, 60 parts.

Notes and Comments.

The Connection Between Diseases of the Abdomen and of the Right Heart.

The *London Medical Record*, March, 1883, says: Dr. Passerini, in a short but weighty article (*Gazz. degli Ospitali*, January 3), gives his views on this subject. Potain, in 1878, was the first to call attention to the fact that affections of the digestive apparatus may give rise to disease of the right side of the heart. With the exception of Tessier and Frank, who wrote in 1879 and 1880, respectively, no other author has written on this relationship. The author relates three cases of tricuspid insufficiency due indirectly to peritoneal effusion. Auscultation revealed at the tricuspid orifice a prolonged first sound, and a regurgitant murmur. The second sound was accentuated, more especially over the pulmonary orifice. When the fluid in the peritoneum was removed, there was marked improvement in the character of the heart-sounds. The mode in which the derangement of the heart is effected is regarded as purely mechanical. Owing to the compression, there is in the abdomen a venous ischæmia, whereby in the thorax there is induced a venous hyperæmia. The right side of the heart thus becomes engorged. Moreover, owing to the pressure from below, the diaphragm becomes fixed; the lungs cannot expand freely and express their contained blood. The consequence is that the flow of blood from the pulmonary arteries through the lungs is obstructed. Thus the right heart is exposed to a twofold strain; the greater pressure of the incoming blood from the thoracic venous hyperæmia; and the obstruction to the outgoing blood from the inefficient expansion of the lungs. In confirmation of these views, the author brings forward other facts. He quotes the observation of Larcher (1859) and of Depaul (1880), frequently verified by himself, that in advanced pregnancy the first sound over the pulmonary orifice becomes accentuated, and that sometimes the first sound over the xiphoid cartilage becomes prolonged and blowing. The same phenomena are observed in cases of ovarian cysts and other large abdominal tumors. Moreover, it is possible in perfectly healthy persons to induce a well-marked accentuation of the sound at the pulmonary orifice by compressing the abdomen, or even by simply causing the subject to hold his breath. From a practical point of view, it would often be of the greatest importance to know whether the abdominal affection was the cause of the heart-mischief.

The Effect of Alcohol on the Fœtus, through the Blood of the Mother.

Dr. W. H. McDaniel writes on this subject, as follows, to the *Maryland Med. Jour.*, May 19, 1883:

"My experience as a medical practitioner for the past twelve years has taught me that it requires a very small dose of alcohol to produce fatal resuts to infants or young children, and the fact that more infants are not still-born from maternal intoxication is really owing to the fact that such conditions of the mother, during parturition, are fortunately very rare. That cases of this nature, however, do happen, I have not the least doubt, as I have had at least eight in my own practice, which could not be accounted for in any other way. For instance: three years ago I was called about 6 o'clock one morning to a woman who had been put to bed the previous evening in a beastly state of intoxication. I found her still drunk, and unable to articulate so as to be easily understood when she attempted to speak. In the bed beside her lay a large, healthy-looking male child with the umbilical cord and placenta attached. There was nothing to indicate that the child died of anything else than alcoholic poisoning contracted by absorption from the mother's blood. The mother herself had no recollection afterwards when or how her offspring came into the world. The husband, who is a sober, industrious man, had slept in the same bed with his wife, but had no knowledge of the birth till just before he summoned me. In the case of prostitutes, we often find that the decomposed bodies of infants will come away from them at any time from the fourth to the ninth month, and still no syphilitic history nor attempts at abortion in the ordinary ways, can be found to explain the cause. A succession of alcoholic debauches might, I think, be very likely to cause the death of the fœtus in utero, just as surely as it is liable to do in the cases of those whose constitutions are calculated to resist the effects of so powerful a poison, with plenty of pure air and physical maturity to back them up. If the fœtus during its intra-uterine life is in any degree liable to suffer from alcoholic intoxication on the part of the mother, then how much more pernicious must the effects of the maternal intoxication be on the fœtus after birth, when it is altogether dependent on its own organs for existence! Dr. Carpenter speaks very plainly on this point, and leaves no room for argument to the contrary."

Iron in Heart Diseases.

According to statements published in his work,

to cases reported by his pupils, and to comments made by the *French Medical Press*, few physicians have been as successful in treatment of cardiac affection as Dr. Constantine Paul. In cases of hypertrophy of the heart, following lesions of the arch of the aorta (endarteritis), or more remote morbid conditions, as that pathological state of the capillaries frequently preceding and always accompanying chronic cases of morbus Brightii, he found for the anæmia which characterizes such cases, no medicine as effectful as the following:

℞.	Syrup. simplic.	260 (f. ℥ viii.)
	Syrup. flor. aurant.	60 (f. ℥ xv.)
	Ferr. citr. ammon. pyrophosph.	3 (gr. xlviii.)
	Solut. Fowleri	1.50 (m. xxiv.)

M. S. Dose.—Tablespoonful.

Malignant Pustule Communicated by a Fly.

The *Jour. Cut. and Ven. Dis.*, for August, 1883, reports the following:

A somewhat remarkable case is reported in the *Gaz. des Hôpitaux*, No. 102, for September 5th, as having occurred in the service of M. Mollière, surgeon-in-chief to the Hôtel Dieu at Lyons. The patient was bitten on the cheek by a large black fly which he immediately killed. The bitten spot in a few hours began to itch violently, but no swelling appeared until the next day. When the patient entered the hospital the whole cheek was of a livid color and enormously swollen, especially over the malar bone, the centre of which region was occupied by a small black phlyctena surrounded by a number of transparent vesicles. The eyelids were considerably swollen, and one of the submaxillary glands was enlarged and tender. There was no fever or other constitutional symptom. M. Mollière's treatment was prompt and energetic. He first completely destroyed the pustule by means of the thermo-cautery, and then injected the swollen parts, including the submaxillary gland, with a twenty per cent. solution of phenic acid. The only internal remedy employed was alcohol, which was administered in enormous quantities without producing the slightest sign of intoxication. The affected surface began to slough off on the third day, and in another week was entirely detached. The healing process proceeded rapidly, and at the end of three weeks the patient was discharged. Blood and serum drawn from the vicinity of the pustule having been forwarded to an eminent expert for examination, he succeeded in detecting a few filaments of the bacillus anthracis, and a cobaye which was inoculated with the fluids, died in a few hours with all the signs of specific gangrenous infection.

Absence of Vagina, Uterus, Ovaries — Enormous Distention of Urethra, without Incontinence.

From the *Med. Record*, July 28, 1883, we note that Dr. James F. Ferguson, Visiting Surgeon to the Charity Hospital, New York, relates the history of a prostitute admitted October 25, 1881. Father was consumptive; mother died of pulmonary hemorrhage. The patient was the tenth child. She denied all previous venereal trouble. Although eighteen, had never menstruated, nor did she give any history of vicarious phenomena. She noticed a pimple on the posterior commissure at the time of admission, followed by a discharge, with scalding on micturition. There were three small chancroids in the posterior commissure. The chancroids were touched with carbolic acid, and dressed with iodoform. On the 29th of November, the parts having healed, a further examination was made, when no vagina was found; the meatus urinarius and urethra were very much enlarged. The sores above mentioned prevented an earlier examination. The labia are well developed. An examination was made by Dr. Ferguson, with Dr. Walter R. Gillette and Dr. E. S. Peck. They failed to find a uterus or ovaries. Investigation was made by the finger in the urethra; also bimanual touch through the rectum, and by sounds. The outer portion of the urethra was greatly dilated; she did not have incontinence of urine. She was well developed—breasts well formed, also the nipples. The mons of normal size. The labia, nymphæ and clitoris presented the usual appearance. In this very remarkable case the unusual feature is exhibited of a urethra largely distended, with no incontinence of urine.

Removal of a Mass of Hair from the Stomach.

From the *Medical Record*, July 15, 1883, we learn that at the twelfth meeting of the German Surgical Association in Berlin, on April 5, Dr. Schönborn, of Königsberg, showed a mass of hair which had been removed from the stomach of a young girl, in whom the presence of a tumor had been diagnosed for one and a half years. The tumor was in the left epigastrium, and was taken for a splenic growth or a floating kidney. Digestion was normal, but fits of vomiting came on at intervals of from three to five days. An opening about five inches long was made in the anterior wall of the stomach, the mass of hair was turned

out, and convalescence followed rapidly. The tumor consisted of innumerable short pieces of hair, which had become felted together, constituting a mass weighing 381 grammes (over 13½ ozs). The girl and her companions had been in the habit of biting off the ends of their plaits of hair and swallowing them, in the belief that they would thereby attain a fine voice. There are seven similar cases in medical literature, all of which, with the exception of one half-grown boy, were met with in the female sex, and none of which were mentally diseased. None of those other cases were diagnosed during life, but all died with symptoms of peritonitis, so that this is the first case of cure.

Xeroderma Pigmentosum.

Kaposi, in 1870, in the text-book of skin-diseases, of which he was the author, jointly with the late Professor Hebra, described under the name *Xeroderma*, a disease of which he had observed two examples. He now (*Wiener Med. Jahrb.*, 1882, p. 619) describes six additional cases of the disease, making in all eight cases, and he proposes to describe it more definitely as *Xeroderma Pigmentosum*. It is a disease of young persons, all the cases hitherto observed having occurred between the age of early childhood and eighteen years. In this sense it seems to be a congenital disease. Twice it occurred in two sisters. The essential features of the disease are pigmented spots intersected with skin free from pigment, a contraction of the surface of the skin, which is thin, and not easily drawn up into folds, and teleangiectasis in the unpigmented parts. The face and extensor surfaces of the arms and legs are the parts first and chiefly affected. The tendency to epithelial carcinoma is very strong, which is the more remarkable when the youthful age of the patients is considered.

Neisser (*Viertelj. für Derm. und Syph.*, 1883, Heft 1) reports a case of xeroderma pigmentosum associated with imbecility and carcinoma. He gives a table of all the cases hitherto published, amounting to twenty-seven in number, and accepts Kaposi's description in all essential particulars. He prefers the term *cum melanosi* to *pigmentosum*, because the pigment is of the melanotic kind, and not the pigment left by blood-extravasation.

Crotalus in Malignant (Hemorrhagic) Scarlatina.

In the *Lancet*, July 14, 1883, Dr. John W. Haywood describes two very grave cases that resisted all ordinary treatment and seemed doomed.

The cuticle was consequently removed from round the throat by a cantharides blister, and to the exposed cutis a wet compress sprinkled with crotalus was applied, and renewed at first every half an hour, and then every three hours, also a dose dissolved in a teaspoonful of water was dropped on the tongue every half hour.

The symptoms all began to improve at once, and the author thus concludes:

"The above notes of these two interesting cases were written at the time, and have been preserved, and withheld from publication in order to test the drug in similar cases before publishing them. This has now been done over and over again, until the writer is thoroughly convinced that the above facts were no mere coincidences, and he now lays them before his colleagues in the hope that the drug will be used in similar cases, for which hitherto there has been no adequate remedy."

Removal of the Gall Bladder.

At the meeting of the German Surgical Congress in Berlin on April 7 (*Wien. Med. Blätter*, May 31), Dr. Langenbuch, of Berlin, showed a woman, aged 34, from whom he had removed the gall-bladder. The patient had suffered from gall-stones for nine months; the gall-bladder was felt as a hard, prominent, sensitive tumor. On opening the abdomen, the gall-bladder was found to be hypertrophied and adherent to the neighboring tissues, and to contain a large number of stones, some of them adherent to the walls, and threatening perforation. The viscus was emptied by a Pravaz's syringe, and then easily detached behind the cystic duct; and the patient now looked well and blooming, although she had had a floating kidney removed in 1881. Langenbuch had operated before on a man who had been taking morphia for years on account of the pain. The operation was successful, and the wound healed well; but the patient died from cerebral anæmia.

Treatment of Lupus.

Aubert (*Annales de Derm. et de Syph.*, Vol. iv., No. 3) relates that at the Hospital l'Antiquille, at Lyons, the actual cautery is still much resorted to in the treatment of lupus. The author himself prefers to use it when the disease is on parts of the body which are generally covered, or where a little additional size of the cicatrix is not important. He prefers it in such cases because the cure is quick, because it exposes less to relapse, and because the future condition of the cicatrix requires less careful watching. When the disease is on the face, he prefers the treatment by scarification.

Special Report.

NO. XIV.—OPHTHALMOLOGY.

BY CHAS. S. TURNBULL, M. D.

(*Continued from page* 165.)

The Maturity of Cataract, its Artificial Ripening, etc.—The Progress of Ophthalmology for the first quarter of 1882—Comparative Studies on the Finer Structure of the Iris—On Induced Fluorescence in the Eye—The Nutrition of the Cornea—The Significance of Fluorescëin for the Exchange of Liquids in the Eye—Congenital Filiform Anchyloblepharon—Ectropion Successfully Treated by Transplantation of Skin from the Arm.

We quote a few pointed "mature" facts, by Prof. R. Forster, M. D., of Breslau, who contributes an instructive paper "On the maturity of cataract, its artificial ripening, corelysis, and extraction of the anterior capsule," which is translated by J. A. Spalding, M. D., Portland, Me. (A. f. O., Vol. xi, No. iii.)

I.—Maturity of Cataract.

It is generally easy to tell with absolute certainty whether a cataract is perfectly mature or not. Still there are some cases in which this point is difficult to decide, from the insufficiency of the well-known criteria for the maturity of cataract, viz., that the iris should not cast a shadow against the lens, and that the pupil, artificially dilated by atropia, should not be illuminable with the ophthalmoscope. There are cataracts which have been mature for years, in which the iris, however, still throws a shadow, and the dilated pupil is more or less illuminable by the ophthalmoscope; while on the contrary, there are cases of immature cataract in which the iris does not throw a shadow on the lens—nor does the dilated pupil give the slightest red reflex from the fundus of the eye when illuminated with the ophthalmoscope.

In order to avoid misunderstandings, we must first agree upon what is meant by a "mature" cataract. As v. Arlt says of mature cataract, "the lens lies in the capsule like a ripe fruit." Hence, by "ripe" or "mature" cataract, we might as well agree to understand one whose whole substance can be evacuated by the operation, without the necessity of any portion of the peripheral layers being left behind by adhering to the capsule.

A mature cataract, consequently, is one in which we can positively assert before the operation that there are no longer any cortical layers which will adhere to the capsule and undergo secondary opacification—even if the pupil can still be illuminated, and the iris still throws a shadow. An immature cataract is one of the consistency which experience teaches us is liable to be accompanied with a layer of cortex adhering closely to the capsule, even if the pupil cannot be illuminated and the iris throws no shadow.

We can declare with confidence that when the anterior surface of a cataract is divided off into sectors, which shine like mother-of-pearl, the cataract is not yet mature. If we wait a few months for the operation, the sectors lose their sharp contours, break down, begin to grow invisible, and finally disappear entirely.

Complete maturity in the above-mentioned sense has now ensued, and we can depend upon a favorable exit of the whole cataract. At a still later stage, the yellow nucleus which had hitherto been remarkably well concealed, becomes somewhat more marked in color, the cortex appears thinner, as if desiccated upon the nucleus, and provided with a few whitish radiating lines—in a word, the cataract is becoming hypermature.

II.—Artificial Ripening of Cataract by Trituration of the Cortex.

The painful period for patients afflicted with cataracts is that which lies between the day when they can no longer read, and the time when the cataract becomes mature. This interval may extend over several years, but fortunately it is often rendered much more endurable by the circumstance that the two eyes are not generally affected is an equal degree at the same time. But when a cataract makes the head of the family incapable of work for year after year, the occurrence becomes a family affliction. The patient thinks that he ought to be operated upon the moment that the cataract incapacitates him for work, whilst the surgeon feels obliged to wait till the favorable moment, the maturity of the cataract, has at last arrived.

Desirous as the surgeon is to do everything that is compatible with safety, he is often inclined, in such cases, to seek experimentally for some operation which may hasten the cataract toward complete maturity.

It is well known that puncture (incision) of the anterior capsule has long been resorted to to produce rapid artificial maturity in cataracts. But the method has not been universally adopted from the dread that it might set up iritis from excessive swelling of the cataract, and lead to complications unfavorable for the subsequent extraction

Personally, I have never seen iritis or cyclitis after puncture of the capsule in cases of senile cataract, while, on the contrary, I have often been greatly surprised at the comparatively slight and rather unsatisfactory effect of the capsular incision in hastening the opacification of a lens with a large nucleus more or less advanced in cataractous degeneration. It has happened to me to observe that an iridectomy occasionally hastens the maturity of cataracts.

We may assume under such circumstances that, owing to the alteration in form to which the lens is subjected by being pushed forward after the escape of the aqueous humor, the connection between the opaque and transparent fibres on the cataract is loosened, and the degeneration of the cortical layers hastened. We may undoubtedly further this condition of things directly after the iridectomy by gently rubbing or stroking the cornea with the blunt angle of a strabismus hook, or the closed iris forceps. It is astonishing to see the effect which is produced upon the lenticular substance by pressing gently upon a cornea which has thus been temporarily deprived of its normal tension. If mother-of-pearl sectors were already present on the anterior surface of the lens, we immediately notice how they break up and intermingle with one another after this manipulation. But even if the sectors had not previously made their appearance, the crushing effect upon the cortex, as thus produced, is easily recognizable by the increased opacification which takes place in the layers which were still transparent, even within the space of only a few days.

I have known cataracts that were illuminable before the operation, to become so opaque six days later, as entirely to cut off the red reflex from the fundus of the eye. The shadow of the iris generally disappears, but not wholly; the white nucleus of Becker's nuclear cataract becomes almost wholly concealed by the opacified cortex. In the same way the senile, yellowish-gray nucleus which had hitherto been visible through the transparent layer of cortex disappears beneath the advancing opacification of the peripheral layers of the lens. Extraction can generally be undertaken in from four to eight weeks after the operation, without the dread of any lenticular fibres adhering to capsule. It is very rare for us to be obliged to postpone the extraction to a later date. The only difficulty in this manipulation lies perhaps in an accurate calculation of the pressure to be applied. If the pressure is excessive, the zonula may easily be ruptured, and when we subsequently perform the extraction, unavoidable loss of vitreous, and difficult delivery of the lens itself, would ensue. I should not think that there was any danger of rupturing the capsule. If, on the contrary, too gentle pressure is brought to bear, the connection between the lenticular fibres will be too slightly disturbed, and speedy maturity will not occur. Both these difficulties are really only imaginary.

The Progress of Ophthalmology During the First Quarter of the Year 1882. By H. Magnus, Breslau, C. Horstmann, Berlin, and A. Nieden, Bochum, and Others. Archives Ophthal., Vol. xi. No. iii.

Bull, C. S. *Treatment of Facial Scars Affecting the Lids Either Directly or Indirectly.* Trans. Amer. Ophth. Soc., 1881. Bull advises the systematic use of massage, and relates three cases in which this mode of treatment produced good results.

White, J. A. *A Simple Way of Performing Optico-Ciliary Neurotomy.* Va. Med. Monthly, December, 1881. He makes the incision in the conjunctiva between the upper and outer recti. A strabismus-hook is then inserted under each of these muscles, and by them the eye is pulled down and toward the nose. The wound is then rendered more open by inserting a lid-elevator under the upper lid of the incision. Through this opening the scissors are introduced and the nerves divided. The eye is then rotated on its axis by the double hook of Knapp, and the posterior part of the sclerotic is carefully cleaned. He has operated on three cases with success by this method.

Chisolm, J. J. *A Singular Case of Hostility to the Local Use of Atropia and Duboisia: the First Causing Facial Erysipelas: the Second, Temporary Insanity in a Patient Seventy Years of Age.* Maryland Med. Jour., December 15, 1881.

Cuisnier. *Pilocarpine in Ophthalmology.* Semaine Med., January, 1882, No. 4. In incipient atrophy of the optic nerve. Care must be taken in patients suffering from heart disease or atheromatous degeneration.

Emmert. *Hyoscinum Hydrojodatum.* A. f. A., vol. xi., 2. Its myotic action is very powerful and is surpassed by no other remedy. A solution of 0.01:10.0 is sufficient. The conjunctiva bears it well.

Fronmüller. *Poisoning by Pilocarpine.* Atropine as an antidote, also homatropine. Memorabilien, vol. ii., 1.

Juhàsz. *Case of Atropine Poisoning Cured by Pilocarpine.* Klin. Monatsbl., March.

Lange. *Iodoform in Blennorrhœa Neonatorum.* Petersburg, Med. Wochenschr., 1882, No. 10. Acts injuriously; luxuriating granulations develop upon the conjunctiva, which finally become so ex-

tensive as to injure the nutrition of the cornea, and thus favor the development of corneal lesions.

Pajzderski. *The Action of Iodoform Salve in Ophthalmology.* Inaug. Dissert., Greifswalde, 1882. One part of iodoform to fifteen of vaseline. Contra-indicated in iritis. Very useful in clearing up the cornea in scrofulous panus and maculæ corneæ.

Berger. *Remarks on the Capsule of the Lens.* Centralbl. f. Prakt. Augenheilk., January, 1882. The capsule consists of lamellæ, of which the outermost one is connected with the zonula zinii; the lamellæ are untied by cement, which is loosened or dissolved in a solution of permanganate of potash. There are nuclei in the lens-capsule of the fœtus. The lens-capsule may be classed as a connective tissue.

Eversbusch. *Comparative Studies on the Finer Structure of the Iris.* 1. The anatomical reason of the slip-shaped pupil. First communication. Zeitschr. für Vergleich, Augenheilk, 1882. 1. The following observations were made on the horse: 1. An uninterrupted muscular layer, as it has been described in man and the rabbit, does not exist in the iris of the horse. There are no arcades as can be shown to exist between the dilatator and the sphincter pupillæ in the man and the rabbit. The connecting links between the dilatator and sphincter pupillæ are simply muscular bands, the arrangement of which may be best compared to the spokes of a wheel. The oblong shape of the pupil of the horse is explained by the existence of an auxilliary apparatus which is attached to the posterior surface of the lens at points corresponding to the shorter diameter, which might be called ligamentum inhibitorium or triangularie iridis.

Preiss. *The Lymph Spaces of Descemet's Membrane, and their Connection with the Cornea.* At the same time a contribution to the knowledge of the anastomosing corneal cells, and their termination on the surface of the endothelium. Virchow, Arch. vol. lxxxvii. 1. On the posterior surface of the cornea a system of tubes (lymph ducts) can be demonstrated, which lie within endothelium cells and their immediate substratum. The tubes are connected with the spaces between the endothelium cells and their nuclear membranes, and also with the lacunar spaces.

Risley, S. D. *A New Trial-glass Frame.* Trans. Amer. Ophth. Soc., 1881. Two bars which slide past each other through a wedge-shaped block, have attached to them the two semi-circular grooves for holding two lenses, with some hooks by which an additional lens can be added. This arrangement allows of a lateral movement of the lenses amounting to 16 mm., or a pupillary distance varying from 50 to 66 mm. It can be held in the hand by means of a handle, or the ordinary spectacle bows can be attached. To be had of Ivan Fox, Optician, 1635 Chestnut St., Philadelphia.

Ehrlich. *On Induced Fluorescence in the Eye. Deutsche Med. Wochenschr.*, 1882. Nos. 2–4. Ehrlich recommends subcutaneous injections of fluorescein for studying the changes of nutrition which cause very intense phenomena of fluorescence of the eye. He has shown by these experiments that the anterior surface of the iris has nothing to do with the reproduction of the aqueous humor, which comes entirely from the posterior chamber. The liquid is not derived from the vitreous by transudation, but is principally secreted by the blood vessels of the ciliary body. Under normal conditions the aqueous humor is secreted in an entirely different manner; two centres of secretion exist at the periphery of the iris, an anterior nasal and a temporary one; they throw the liquid with a certain force, and in a fixed direction upon the posterior surface of the cornea, after which the stream moves in a horizontal direction. An angle is formed at the point where the currents meet. The secretion of the posterior chamber is widely different from the aqueous humor.

Gradenigo. *Auscultation of the Eye.* Ann. d' Ottalm., Vol. x. 6. Three kinds of sounds may be heard on the eye: 1. A muscle-sound, resembling the humming of flying insects. 2. Sounds heard at in- and expiration, and due to the respiratory organs, as the nose, etc. 3. A sound heard when the muscles contract; it is clearly defined, and can be easily distinguished from the others.

Kroner. *The Perceptions of the New-Born.* Breslauer Arztl. Zeitschr., February 18, 1882, No. 4. A new-born child cannot control the motions of the muscles of the eye. There is perception of light. The reflex-arch from the optic nerve to the facial nerve supplying the lid and the branch of the oculomotor nerve supplying the iris is completely developed. In regard to the motion of the eyes, he is inclined to think that at birth there is no preformed nervous mechanism ready to exercise binocular symmetrical vision.

Pflüger. *The Nutrition of the Cornea.* Klin Monatsbl., March. The cornea is not nourished by the aqueous humor, as Knies and Weiss erroneously maintained, but from the conjunctiva and sclera. In general, the conjunctiva nourishes the superficial, the sclera the deeper layers of the cornea. Within the cornea the lymph-current flows in a centripetal direction from all points of

the periphery, then turns inward and enters the aqueous humor. No centrifugal counter-current of any consequence from the aqueous humor into the cornea exists.

Schöler and Uhthoff. *The Significance of Fluorescein for the Exchange of Liquids in the Eye.* Annual report for 1881, Berlin, 1882. They come to the following results:

1. Under normal conditions the iris does not cut off the communication between the anterior and posterior chambers, the aqueous humor being constantly renewed from the latter.

2. A current passing from the vitreous through the zonula of Petit's canal and the iris into the anterior chamber does not exist.

3. The anterior surface of the iris does not take part in the renewal of the aqueous humor, which is derived from the blood-vessels of the ciliary body and the posterior surface of the iris, the "secretory angle." This current gives rise to Ehrlich's line, which always begins behind the iris at the edge of the pupil.

4. The secretion from the "angle" does not take place simultaneously over its whole surface.

5. The greater part of the current which exists in the eye flows along the iris through the pupil into the anterior chamber, a smaller portion of it going into the lens through Petit's canal and into the vitreous. Vitreous and anterior chamber are, therefore, not separated from each other.

6. If the fluorescein, before its discharge, has passed the vascular system of the eye (subcutaneous injection), only a small part of it enters the lens and vitreous, the effect of which soon disappears. If, however, it is injected into the anterior chamber, a large proportion is absorbed by the lens; but when injected into the vitreous, it enters the lens only when it has previously passed into the anterior chamber.

7. The colored fluid is absorbed by the lens from the corticalis toward the nucleus, and disappears in the same order. The innermost parts of nucleus become colored only after two to three weeks.

8. The vitreous does not participate in the nutrition of the lens, as the latter remains uncolored for days, though the whole vitreous is deeply stained, provided the aqueous humor had not previously become colored. The latter event, after an injection to the vitreous, favored and produced as it is by an increase of tension in the vitreous and a decrease in the anterior chamber, does not take place through physiologically pre-existing paths.

9. Opening the anterior chamber (puncture, sclerotomy, iridectomy) changes both the quantity and quality of the fluid discharged from the secretory angle, and in this manner influences the nutrition of the lens and vitreous.

10. The secretion of the aqueous humor is controlled by nervous influence. Division of the cervical branch of the sympathetic nerve, with or without excision of the superior cervical ganglion, causes the appearance of the colored secretion in half the normal time, and decreases the quality of the secreted liquid. The subcutaneous injection of fluorescein is, therefore, a new method of determining trophoneuroses of the eye, which thus far could not be diagnosticated. Secretory and oculo-pupillary fibres of the sympathetic nerve spring with separate roots from the spinal cord, so there are special secretory nerves for the eye.

11. Intracranial division of the trigeminus hastens, increases, and changes the secretion of the eyes still more than division of the cervical branch of the sympathetic nerve.

12. As division of three-fourths of the nerve in the posterior section of Gasser's ganglion does not alter the secretion in the eye, provided the most medial part be preserved, the secretory fibres must be within the medial fourth.

Schmidt-Rimpler. *The Specific Reaction of the Optic Nerve for Mechanical Irritation.* Centralbl. f. d. Med. Wissensch., 1882, No. 1. Direct irritation of the optic nerve with a pear-shaped electrode in patients whose eyes had recently been enucleated, showed that the optic nerve has a specific reaction, which manifested itself to the patients as a sensation of light.

Häuselmann. *Popular Treatise on Color-perception.* Zurich, 1882. With eight colored plates. For use in academies, high schools, seminaries, trade schools, and self-instruction of artists and laymen. It is divided into a theoretical and a practical part. The former contains the commonest physiological and physical phenomena; the latter treats of the use of colors in painting. He accepts of the evolution of the color-sense from light-sense, and advocates educating the color-sense.

Hasner. *Ankyloblepharon Filiforme Adnatum.* Zeitsch. f. Heilk., vol. ii., p. 429. In a child two days old a thread of skin 1 cm. long and as thick as a thread, was found stretching from the outer margin of one lid to the other, which tore on the fourth day. It consisted of neoplastic fibrillary tissue.

Lewkowitsch. *Congenital Partial Symblepharon.* Klin. Monatsbl. f. Augenheilk., vol. xx., p. 14. In a boy twelve years old a horizontal bridge of

mucous membrane without blood-vessels was found, which sprang from the inner surface of the outer canthus and ended with a fan-shaped insertion on the posterior part of the conjunctiva.

Tosswill. *Ectropion Successfully Treated by Transplantation of Skin from the Arm.* Mr. Louis Tosswill, of Exeter, reports a case of ectropion, due to an extensive burn, which was successfully treated by this method. The eversion of the lids was so extensive before the operation that the globe was exposed during sleep. This was rectified by the operation, and the transparency of the inflamed and opaque cornea was restored.—*Brit. Med. Jour.*, January 7, 1882, p. 9.

(*To be continued.*)

CORRESPONDENCE.

Foreign Correspondence.

BRUSSELS, *July* 28, 1883.

EDS. MED. AND SURG. REPORTER:—

A short visit to London enabled me to collect a number of medical items which I thought might interest your readers. It is singular what a healthy summer resort that greatest of cities is! You will probably be surprised, as I was, to find out that from the mortality reports it is actually more conducive to longevity to live in town than in the country. At any rate, I noted several weeks when the London mortality showed an annual average of about 17.5 per thousand against 18.5 for the rest of England. I recollect that a few years ago some pessimist undertook to prove that the difficulty of sanitation drew a natural limit to the growth of cities. This don't look like it.

It is only a fair result of this that medical men as a class are extremely highly respected in England. Their value to the commonwealth is daily growing in appreciation. Two whose names are familiar to Americans were baronetted last month, Mr. P. G. Hewett, whose *Surgery* is a hand-book with us, and Dr. Andrew Clark, whose various works on clinical medicine, of which he is professor at the London Hospital, are in many of your readers' libraries.

That the profession intends to maintain its position by a rigid criticism of applicants for its honors is also evident. The final examination at the Royal College of Surgeons was held a week or two ago, and out of 769 candidates the pretty large figure of 281—considerably over one-third, you will notice—were rejected. Did anything of the kind ever occur at an American college? I never heard of it.

I must of course say something of the cholera. It has been a leading topic in all the papers for a month. The old quarrel about the efficacy of strict quarantine has been revived with vigor. The Latin nations approve of the old plan, but the English condemn it as useless at best, and an unwarranted torture. The French and Italians very openly hint that the English opinion is based rather on the detriment of quarantine to the immense English shipping interests than on scientific observations. We had the same discussion about quarantine in yellow fever in the States a few years ago. The scientifice point was not settled, but the practical value of a "shot-gun quarantine" was tolerably well demonstrated down South.

Fortunately, up to this date no cases of epidemic cholera have been determined on European soil. The dozen or so reported at different points are all, from the best observations accessible to me, of undoubted sporadic type. A high authority, Dr. Fauvel, of Paris, argues that the precedents of epidemics of cholera show that it requires *two* years to travel from India to England. The rapidity of travel he does not think of much importance. The "atmospheric constitution" must be imported, or must come along also, and this moves slowly, and is not carried by steamships. A doubtful theory.

The authorities in Alexandria are offering $500 and $600 a month to European physician who will face the plague in the infected districts. But even at those terms they have not enough applicants to supply their wants.

VOYAGEUR.

NEWS AND MISCELLANY.

Medical Dermatological Association.

The seventh annual meeting will be held at the Sagamore House, Green Island, Lake George, on Wednesday, Thursday, and Friday, August 29, 30, and 31. Papers will be read by the following gentlemen:

Dr. Piffard, "Treatment of Acne."

Dr. Hyde, "A Study of the Coincidence of Syphilitic and Non-Syphilitic Affections of the Skin."

Dr. Graham, "General Exfoliative Dermatitis."

Dr. Stelwagon, "Impetigo Contagiosa."

Dr. Robinson, "Alopecia Areata."

Dr. Duhring, 1. "On the Value of a Lotion of Sulphide of Zinc in the Treatment of Lupus Erythematosus." 2. "Report of a Case of Ainhum with Microscopic Examination."

Dr. Atkinson, "A Case of Multiple Cachetic Ulceration."

Dr. Sherwell, 1. "Pseudo-Psoriasis of the Palm." 2. "Malignant Papillary Dermatitis."

Dr. Bulkley, 1. "A Hitherto Undescribed Vegetable Parasite Found on the Human Skin." 2. "A Clinical and Experimental Study on Pruritus."

Dr. Van Harlingen, "Experiments in the Use of Naphthol."

Dr. Fox, "A Trip to Tracadie."

ARTHUR VAN HARLINGEN, M. D.,
Secretary.

The Bread-pill Cure of Hysteria.

MM. Landouzy and Ballet, in the *Revue Mensuelle de Médicine*, give the history of an hysterical patient to which it is well to give an extended publicity, not because it presents any novel feature, but as a proof of the scientific errors of those ill-trained minds which attribute the cure of hysteria to supernatural influences. An hysterical patient, twenty-six years of age, who had previ-

ously suffered from chorea, was received in the wards of the Charité. There was very marked contraction of the lower limbs, and the patient was unable to execute the slightest movement, not being even able to raise herself in bed. After one or two hypodermic injections of morphia, given at her express desire, she was told that she should have a more energetic remedy, and must use it cautiously. On October 7, bread-pills were prescribed, and the next morning she related that wishing to poison herself, she had swallowed the pills; at once the effect was terrible, but soon after she was able to walk a little, and eagerly asked to have another pill; this was accorded, and resulted in her complete recovery. Two days later on, she helped to clean the wards. In a month's time she left the hospital.

Errata.

Read "The fluid extract of Gelseminum may be given in *three or four* drop doses A DAY," and not three times a day as is read on page 117 of the issue of August 4, 1883.

On page 165 (August 11) for hypo-sulphite of soda ℥ viij. read ʒ viij.; for aqua ʒ viij. read ℥ viij.

Items.

—An ear-ring—a convention of otologists.—*Puck.*

—M. Dujardin-Beaumetz has been made an officer of the *Legion d' Honneur.*

—The degree of LL. D. has been conferred on Dr. H. C. Wood by Lafayette College, Pa.

—To administer cod-liver oil, add to the dose thirty drops of sulphuric ether, and have both *cold.*

—In addition to the cholera, leprosy is said to have become very prevalent of late in the neighborhood of Damietta.

—A number of young doctors in Cincinnati have organized a "Drake Medical Society." More *quackery* in the profession.

—There are more physicians in Denver in proportion to the population than in any other city in the United States, says the Denver *Medical Times.* A Microscopical Society has recently been organized, and a Woman's Hospital established.

OBITUARY NOTICES.

W. B. RIZNER, M. D.

Dr. W. B. Rizner, a prominent physician of Cleveland, dropped dead in his residence in Huron street, that city, at three o'clock, July 22. He was fifty-nine years old. He was the inventor of a mechanical finger used in microscopy, and President of the Cleveland Microscopical Society.

QUERIES AND REPLIES.

A Question in Ethics.

EDS. MED. AND SURG. REP.—Will be glad to have your opinion as regards the violation of or non-violation of the Code of Ethics in the following detailed case:

Mr. X., the client, after a few days, becomes dissatisfied with Dr. A's treatment, and determines to have either Dr. Y. or Dr. Z. to attend him.

Mr. X.'s messenger goes for Dr. Y. and fails to find him in his office. He next goes to Dr. Z.'s office, finds him, and asks him to go, six miles into the country, to see Mr. X., stating that he came for Dr. Y. or Dr. Z. (Dr. A.'s office is in a short distance of Dr. Y.'s and Dr. Z.'s.) Dr. Z., without further inquiry, goes to see Mr. X., and upon questioning him, learns that Dr. A. had called in the forenoon and also on the day preceding.

Mr. X. was found to be suffering very much. Dr. Z. prescribed, and on the following day wrote Dr. A. a card stating to him that he (Dr. Z.) had seen a Mr. X. the evening before. Dr. A. replied, asking the circumstances under which Dr. Z. was called. He was interviewed by Dr. Z., and Dr. Z.'s action in the case seemed to be approved of by Dr. A., but Dr. A. stated to Dr. Z. that Mr. X. had treated him very badly, and in the future he scarcely thought he'd respond to a call from him.

The following day Mr. X.'s messenger came to Dr. Z. for prescription. Dr. Z. refused to give it until Dr. A. had been notified of the dissatisfaction of Mr. X. by his messenger. Messenger went to Dr. A.'s office, told him Mr. X. did not longer desire his services, and would allow Dr. Z. to continue in the case. Dr. A. said: "I will not have anything to do with the case, nor shall Dr. Z.; if you want some one else, go for Dr. Y." Messenger went back to Dr. Z., stated the case, and Dr. Z. prescribed, and still continues in the case.

Did or has Dr. Z. violated the spirit of the Code of Ethics as adopted by the American Medical Association?

We will be glad to hear from you immediately.

DUNLAP & KELLEAM, Ft. Smith, Ark.

Ans.—There are so many little points involved in these ethical questions that it is very difficult to give an answer, unless acquainted with all the details. To answer the question as stated above, we would say that Dr. Z. had not violated the Code, since he only prescribed in an emergency, then notified Dr. A. of what he had done, and gave no further attendance to the case until Dr. A. had been dismissed, and had refused further attendance. If Dr. Z. said nothing disparaging to Dr. A., then we fail to see wherein he did wrong. EDS. MED. AND SURG. REP.

MARRIAGES.

CLAYTON—BRACE.—In the Presbyterian church in Blackwood, N. J., July 11, by Rev. F. R. Brace, William G. Clayton, M. D., of Point Pleasant, N. J., and Mary B. Brace, daughter of the officiating clergyman.

SKEELS—ECKLEY.—At the residence of the bride's parents, July 12, 1883, by Rev. R. R. Gailey, assisted by Rev. J. D. Vail, Dr. Wm. O. Skeels and Miss M. L. Eckley, all of Carrollton, Ohio.

DEATHS.

ESS.—In Memphis, Tenn., Tuly 13, 1883, Dr. Henry Ess, aged thirty-two years.

FERRIS.—At his late residence, 341 George street, Cincinnati, Ohio, at two o'clock p. m., July 19, Dr. F. W. Ferris, aged sixty years.

HEMPTTEAD.—At Portsmouth, Ohio, July 9, 1883, Dr. G. S. B. Hempstead.

L'HOMMEDIEU.—At Riverside, near Cincinnati, Ohio, Thursday, July 12, Dr. S. S. L'Hommedieu, in the forty-first year of his age.

WARDER.—At his residence, Aston, North Bend, Ohio, July 14, 1883, John A. Warder, M. D., in the seventy-second year of his age.